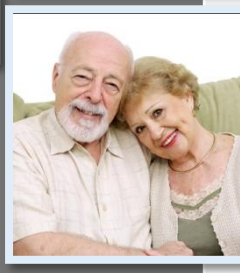
2011 – 2016
(Updated 2014)

INDIANA STATE HEALTH IMPROVEMENT PLAN (I-SHIP)

Partnering for the Public's Health





Indiana State Department of Health
2011 -2016

INDIANA STATE HEALTH IMPROVEMENT PLAN (I-SHIP)

2011 – 2016
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Partnering For The Public's Health

JULY 2011

Work related to the Indiana State Health Improvement Plan was supported by the Department of Health & Human Services Centers for Disease Control and Prevention "Strengthening Public Health Infrastructure for Improved Health Outcomes" Award Number 5U58CD001308.

Indiana State Department of Health
An Equal Opportunity Employer

Michael R. Pence
Governor

Jerome M. Adams, MD, MPH
State Health Commissioner

January 2015

Dear State Health Improvement Plan Reader:

Nearly three and half years ago, Dr. Gregory Larkin and the Indiana State Department of Health (ISDH) developed the 2011-2016 Indiana State Health Improvement Plan. Since the release of the state plan, numerous public health system partners have worked to ensure the plan continues to be utilized, implemented and monitored. The Executive Committee continues meeting and receiving updates, including changes to the work plan based on new data and evidence-based practices. Today we can say we are making progress in all six priority areas.

ISDH is pleased to release the updated version of the State Health Improvement Plan. Included in this release is current state profile data, the monitored work plan including evaluation results to date, and modification of indicators to reflect new projects and the results of implemented legislation.

Since the release of the Indiana State Health Improvement Plan, Governor Mike Pence, William C. VanNess II, MD (former State Health Commissioner) and I have been able to focus work in three key priorities for this administration: decrease infant mortality rates, decrease adult smoking rates, and decrease adult obesity rates. In addition, Indiana partners and coalitions have been able to utilize the State Health Improvement Plan for additional funding opportunities. The Plan has also leveraged legislation to improve health outcomes and improve public health processes such as inspection criteria and the statewide smoke free air law. Indiana, however, has a lot of work that must continue before long-term, sustainable public health outcomes can be realized.

To improve Indiana health indicators, every public health system partner, coalition and Indiana resident has a role to play. I challenge every stakeholder to review the updated Plan and determine what component of the plan they can implement to improve the health of every Hoosier. I have confidence that Indiana can and will have improved health outcomes.

Sincerely,

Jerome M. Adams, MD, MPH
State Health Commissioner

Indiana
A State that Works

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To promote and provide essential public health services.

A Letter from the Co-Chairs On Behalf of the Indiana State Health Improvement Plan Executive Committee

Dear Public Health Partners:

The Indiana State Health Improvement Plan is founded on the premise that together, Indiana Public Health System partners can make a difference. It is with this premise, the Executive Committee has continued to monitor the work of the Indiana State Health Improvement Plan over the last two years. Although there have been many staffing and leadership changes during this time, the work of the Executive Committee has continued. This broad-based group of individuals represented health care providers, academia, non-profit health organizations, state and local public health departments, and state governmental agencies who subscribed to a broad definition of health.

The State Health Improvement Plan envisions o*ptimal mental, physical, environmental, social, and intellectual well-being for all Hoosiers leading to a healthy, productive, vibrant and prosperous state.*

We are pleased to present the update of the Indiana State Health Improvement Plan to the Governor, the State Health Commissioner, and to you, our Indiana public health system partners and Indiana residents. The leads for each priority area have presented the progress of the plan, including whether they are excelling in their objectives or have a lot of work to do before completion of the plan. We encourage every stakeholder to see what they can do to improve the health of Indiana.

During the last three years the smoking rate has decreased; the obesity rate has stabilized; infant mortality has moved to the forefront of the Governor Pence's health agenda; new relationships with farms to improve food safety protocols of ready-to-eat produce have been forged; quality improvement trainings to reduce healthcare associated infections have started; and testing and treatment for HIV/STIs has increased.

The Plan continues to focus on six key priority areas that, when achieved, will significantly impact health outcomes in Indiana. Goals and objectives relating to these priorities, as well as suggested strategies comprise the health improvement plan.

It is the hope and intent of the State Executive Planning Committee that each and every public health system partner will identify activities in the Plan which will enable them to contribute to the improvement of health outcomes in Indiana. No single organization has the capacity or depth of resources needed to improve health to an optimal level or even to maintain it at its current level. With two years left, there is a lot of work to be achieved but we are confident that, together, we will continue to improve the health and well-being of Indiana residents.

Sincerely,

Dr. Kristin Adams
Co-Chair

Dr. Deborah McMahan
Co-Chair

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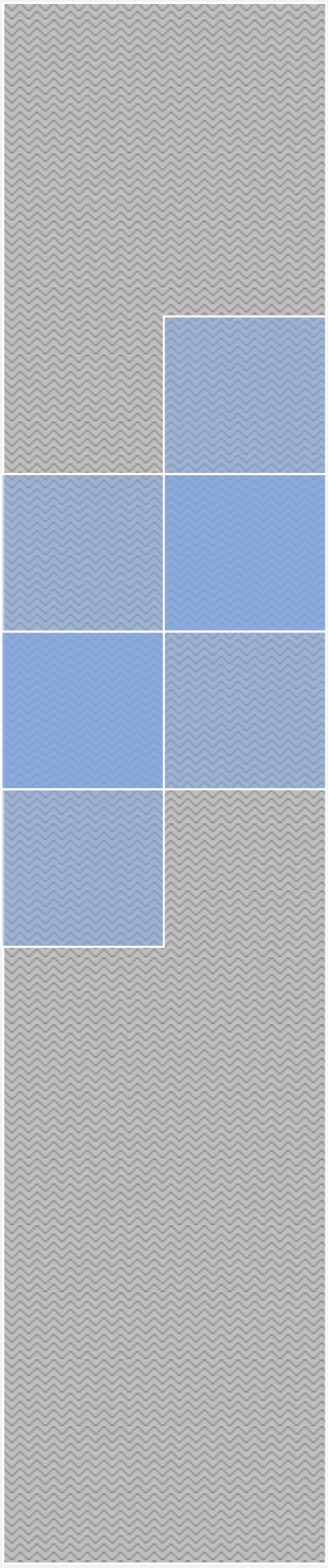
EXECUTIVE SUMMARY

Effective state health improvement planning that provides a statewide, systematic, and consistent approach linking health promotion to measurable change in health outcomes and optimal delivery of services is critical in today's ever-changing public health environment. This Indiana State Health Improvement Plan (I-SHIP) is a comprehensive implementation plan that sets out goals, identifies data-driven priorities, and provides a process for managing and measuring progress. The Plan is part of a framework to focus the public health workforce and all state and local public health system partners on primary, secondary and tertiary prevention efforts to impact Indiana's most pressing population health issues. The long-term goals and accountability measures of the Plan have been established in alignment with the Indiana State Department of Health (ISDH) Strategic Program Plans.

I-SHIP incorporates the work of a State Health Improvement Planning Committee that has dedicated their time and expertise over the past year to develop this document. The Plan is a concise document that is intended to serve as a guide and a tool for health improvement planning for the Indiana State Department Health, as well as all public health system stakeholders and communities statewide. It outlines an approach that generates goals and performance measures for accomplishing the overall vision of the Committee.

The ongoing process of implementing I-SHIP will bring together stakeholders and ISDH staff on a periodic, regular basis through a public-private advisory committee to review health priorities, progress, and accountability measures as part of ongoing evaluation. Important to this Committee will be the need to evaluate new health data that provides indication of the need for additional or emerging health priorities in the state.

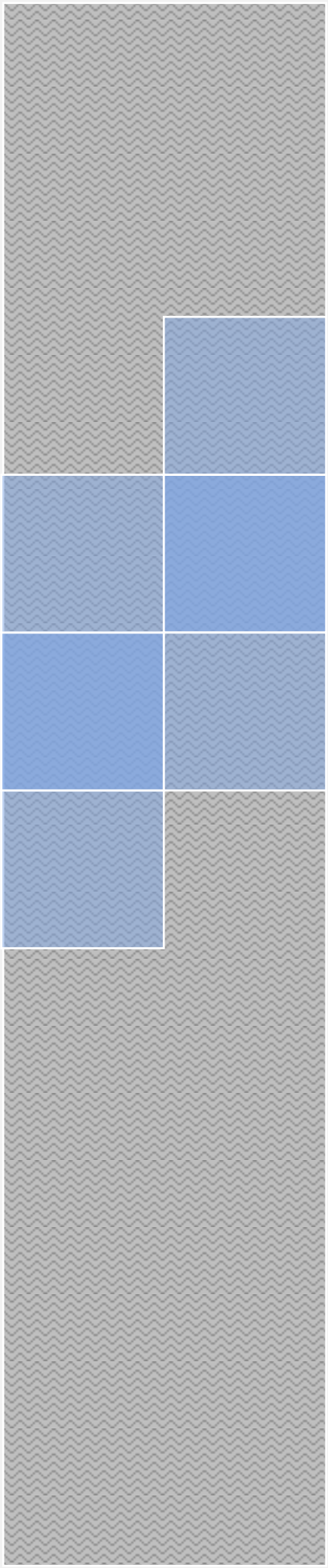
I-SHIP is not intended to be a final report or "end document." It is intended to be the beginning of a process that will monitor and evaluate health priorities in an ongoing manner. I-SHIP provides an approach that is structured in nature and specific enough to guide decisions, but flexible enough to respond to new health challenges. Its inclusive process represents a framework for all stakeholders.



RECOMMENDATIONS FOR HEALTH PRIORITIES

The six health priorities for Indiana are listed below and are not prioritized. They represent what is determined to most significantly influence health and illness in the state, and align with selected Centers for Disease Control and Prevention (CDC) health priorities as identified by Dr. Thomas Frieden. In addition, each is influenced by associated behavioral, environmental, and social contextual factors.

- Increase Hoosiers at a healthy weight by reducing the prevalence of **Obesity** in Indiana.
- Decrease **Tobacco Usage** to reduce the tobacco burden on Indiana.
- Reduce **Infant Mortality** by decreasing the percentage of preterm births in Indiana.
- Assure **Food Safety** by reducing infectious/intoxication associated with food-borne illness outbreaks due to pathogens commonly transmitted through foods.
- Reduce **Healthcare-Associated Infections** by reducing the standardized infection ratio for healthcare-associated infections in healthcare facilities.
- Reduce the burden of **HIV, Sexually Transmitted Diseases** and **Viral Hepatitis** by decreasing incidence in Indiana.



INDIANA: BACKGROUND

Indiana is ranked as the 16th most populous state in the nation, with an estimated 2013 population of 6,570,902. It is also ranked as the 16th most densely populated state in the nation, with an estimated 182 individuals per square mile.

The median age of all Hoosiers in 2012 was 37.3 years. Indiana's population grew by 0.8% between 2010 and 2012, and by 1.3% between 2010 and 2013. Indiana's major racial groups in 2012 included Whites (84.3%), Blacks (9.2%), and Asians (1.6%). Hispanics/Latinos comprised 6.3% of the state's population.

Indiana is a home-rule state comprised of 92 counties and 93 local public health jurisdictions. Nearly one-half of Indiana counties are designated as being rural, with 85% (78) of them having Health Professional (Primary Medical Care, Dental, and/or Mental Health) Shortage Areas (HPSA) and 77% (71) of them having Medically Underserved Areas (MUA).

The median household income for residents of Indiana in 2012 was $46,974. The state's unemployment rate in April 2014 was 5.5%. Indiana's poverty rate was 15.6 % in 2012.

In 2012, the percent of Indiana residents 25 years of age or older with a high school diploma or higher was 87.6%. The percent of adults 25 years of age or older with a bachelor's degree or higher was 23.4%.

The infant mortality rate in Indiana in 2012 was 6.7 per 1,000 live births. The Black infant mortality rate in Indiana was 14.5, but it was 14.8 in Lake County and 11.4 in Marion County. In addition in 2012, Indiana had one of the highest smoking rates during pregnancy (16.5%) of the 38 states and District of Columbia that utilize the 2003 revision of the U.S. Standard Certificate of Live Birth. Furthermore, 9.6% of births in Indiana were preterm and 7.9% of infants were low birth weight.

Indiana is challenged by a number of health factors impacting outcomes in the state. For example, childhood and adult obesity rates in Indiana were among the highest in the nation (31.4% for children 10-17 years in 2011/12 and 31.8% for adults in 2013). Almost 34% of adults self-

reported a history of high blood pressure, and 40% who had their cholesterol checked had been told they have elevated cholesterol.

Leading causes of death in Indiana for men and women continue to be heart disease, cancer, chronic lower respiratory diseases, and cerebrovascular diseases (stroke), which can all be attributed to obesity.

Indiana has experienced devastating floods in the last decade. Indiana is also located near the Wabash Valley Fault, where the risk of an earthquake in the next 20 years is a significant threat.

In 2007, the Environmental Integrity Project named 12 Indiana coal-burning power plants among the 50 "dirtiest" in the country for producing health-damaging pollutants. The report underscores the potential health threat from power company smokestacks.

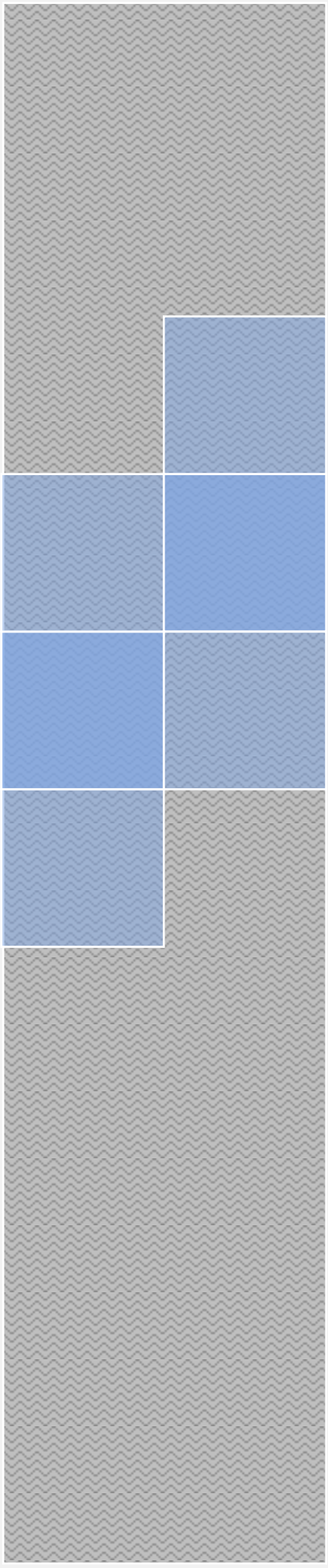
According to the 2011 Association of State and Territorial Health Officials (ASTHO) *Profile of State Public Health*, Indiana had only 12.8 state health agency full-time equivalents per 100,000 population, compared to the national average of 50.9 state health agency full-time equivalents per 100,000 population. The rates among all the states ranged from 5.4 to 271.2.

According to Trust for America's Health, Indiana ranked 50th in Centers for Disease Control and Prevention (CDC) per capita funding in Fiscal Year 2012, with only $13.67 per person compared to the national average of $30.38. Indiana also ranked 50th in Health Resources and Services Administration (HRSA) per capita funding in Fiscal Year 2013, with only $12.88 per person compared to the national average of $42.54.

A 2008 report released by Trust for America's Health (*Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities)* concluded that an investment in evidence-based public health prevention programs could save Indiana $343 million dollars annually within five years, with a return on investment of $5.52 for every $1 invested.

VISION STATEMENT FOR HEALTH IN INDIANA

Optimal mental, physical, environmental, social, and intellectual well-being for all Hoosiers leading to a healthy, productive, vibrant and prosperous state.

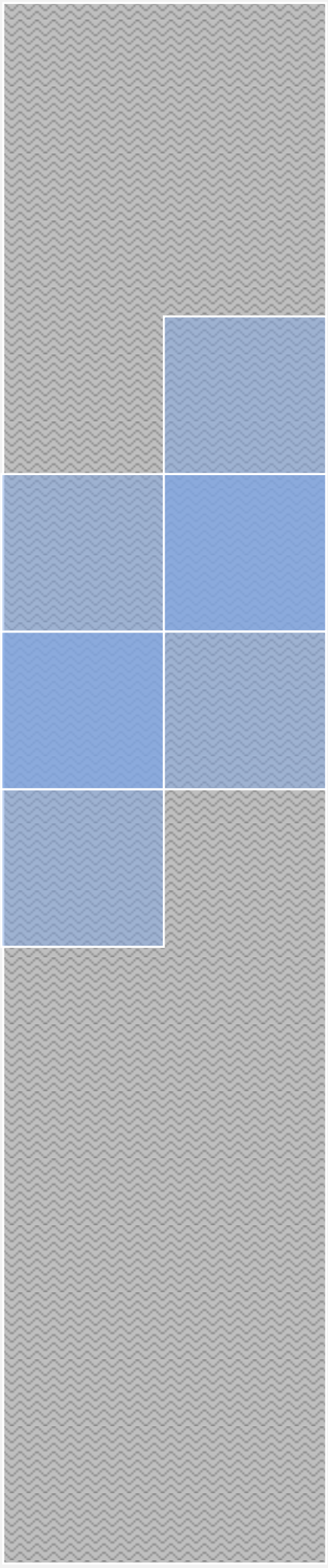


PROCESS FOR DEVELOPING THE PLAN

The implementation and evaluation process of I-SHIP is key to understanding the difference between a comprehensive implementation plan and a strategic plan. The I-SHIP planning process began with identification of a vision for the public's health by the State Health Improvement Planning Committee, comprised of a broad-based partnership and key stakeholders. The Committee, in partnership with the ISDH, established priorities that were reflective of current health needs. Health priorities are supported by multi-level performance measures and activities that incorporate primary, secondary, and tertiary interventions for each. The measures included in the Plan will enable the ISDH and the ongoing I-SHIP Advisory Committee to systematically track progress over time. The overall approach is a shift from being reactive towards an approach that is more 'proactive' in nature to create a healthier Indiana.

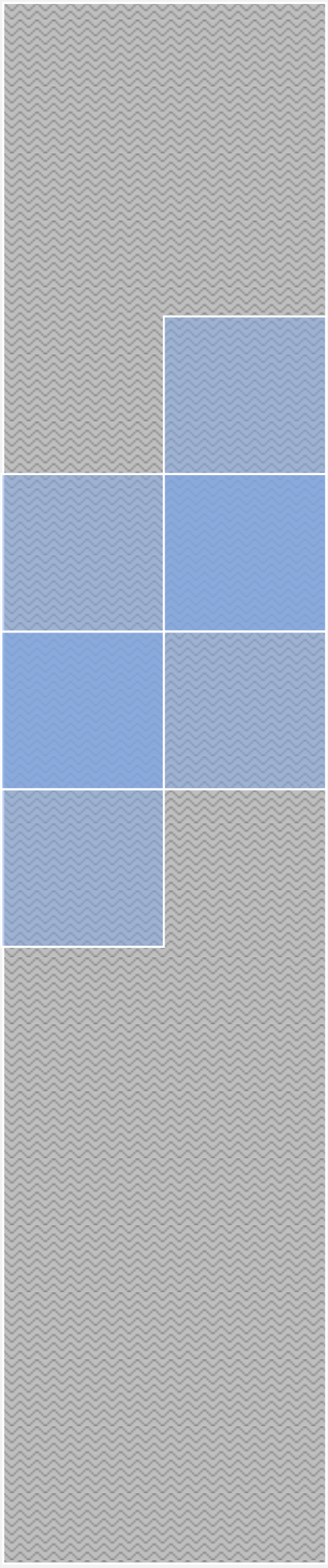
The Plan builds on a foundation of:

- Building, sustaining and creating where necessary, collaborative public health system **partnerships.**
- Health **promotion** and disease **prevention.**



SECTION 1: THE STATE OF HEALTH IN INDIANA

This section presents a general overview of some of the major health problems in Indiana. In the first part of this section, demographic trends and their implications for public health are presented. In the second part, trends in health status are examined. This includes infant mortality rates, premature birth rates, low birth weight rates, and coronary heart disease, cerebrovascular disease, and diabetes death rates, as inferences can be made from the data and conclusions drawn about the general good or poor health status of the population.



DEMOGRAPHIC TRENDS AND PRIMARY HEALTHCARE SERVICES

Indiana is ranked as the 16th most populous state in the nation, with an estimated 2013 population of 6,570,902. It is also ranked as the 16th most densely populated state in the nation, with an estimated 182 individuals per square mile.

The median age of all Hoosiers in 2012 was 37.3 years. Indiana's population grew by 0.8% between 2010 and 2012, and by 1.3% between 2010 and 2013. Indiana's major racial groups in 2012 included Whites (84.3%), Blacks (9.2%), and Asians (1.6%). Hispanics/Latinos comprised 6.3% of the state's population.

Counties with the highest concentrations of Blacks in 2012 included Marion (26.7%), Lake (25.1%), St. Joseph (13.0%), Allen (11.9%), LaPorte (10.6%), and Vanderburgh (8.5%). Counties with the greatest concentrations of Asians in 2012 included Monroe (6.4%), Tippecanoe (6.3%), Bartholomew (4.8%), Hamilton (4.3%), Allen (2.9%), and Hendricks (1.9%). Counties with significant Hispanic/Latino populations in 2010-2012 included Lake (17.1%), Elkhart (14.4%), Clinton (13.7%), Cass (13.0%), Noble (9.7%), and Marion (9.6%).

For purposes of health improvement planning, subgroups also exist within the major minority groups and can differ significantly with regard to language, health beliefs and cultural health practices. The Asian population in Indiana, for example, includes Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and Other Asian. The Hispanic/Latino population, similarly, includes Mexican, Puerto Rican, Cuban, and Other Hispanic or Latino.

In addition, other minority groups and special populations live in Indiana, and represent special populations that are recognized within the context of health improvement planning. These include Native Americans, Amish, and Burmese, as well as migrant seasonal farm workers in some counties.

For example, the Pokagon Band of Potawatomi Indians, a federally recognized Indian tribe of approximately 4,600 members who speak Algonquian, resides in northeastern Indiana and southwestern Michigan. Indiana also has 21 settlements of Old Order Amish, representing an estimated population of 39,000, the third largest in the nation.

As shown in the table below, the 65 years and over group represented 13.6% of the population, and had grown by 5.7%. The 20-24 years group had grown by 5.6%. The non-White population was 15.7% of the total population, and was comprised primarily of Blacks (9.2%). The greatest growth was in the Native Hawaiian/Pacific Islander (20.3%), the Two or More Races (10.9%), and the Asian (5.1%) populations. The Hispanic or Latino population represented 6.3% of the total population, and had grown by 4.9%.

TABLE 1.1 INDIANA POPULATION BY AGE, RACE, &ETHNICITY

	2010	% OF POPULATION	2012	% OF POPULATION	% CHANGE
Total Population	6,483,802	100%	6,537,334	100%	+0.8%
Population by Age					
Under 5 years	434,075	6.7%	424,157	6.5%	-2.3%
5-19 years	1,372,507	21.2%	1,356,709	20.8%	-1.2%
20-24 years	452,026	7.0%	477,523	7.3%	+5.6%
25-44 years	1,668,175	25.7%	1,653,720	25.3%	-0.9%
45-64 years	1,715,911	26.5%	1,735,799	26.6%	+1.2%
65 years and over	841,108	13.0%	889,426	13.6%	+5.7%
Population by Race					
White	5,467,906	84.3%	5,513,003	84.3%	+0.8%
Black	591,397	9.1%	598,171	9.2%	+1.1%
American Indian / Alaskan Native	18,462	0.3%	16,295	0.2%	-11.7%
Asian	102,474	1.6%	107,736	1.6%	+5.1%
Native Hawaiian / Pacific Islander	2,348	0.0%	2,824	0.0%	+20.3%
Some Other Race	173,314	2.7%	157,490	2.4%	-9.1%
Two or More Races	127,901	2.0%	141,815	2.2%	+10.9%
Population by Ethnicity					
Hispanic or Latino	389,707	6.0%	408,900	6.3%	+4.9%
Not Hispanic or Latino	6,094,095	94.0%	6,128,434	93.7%	+0.6%

Source: US Census Bureau

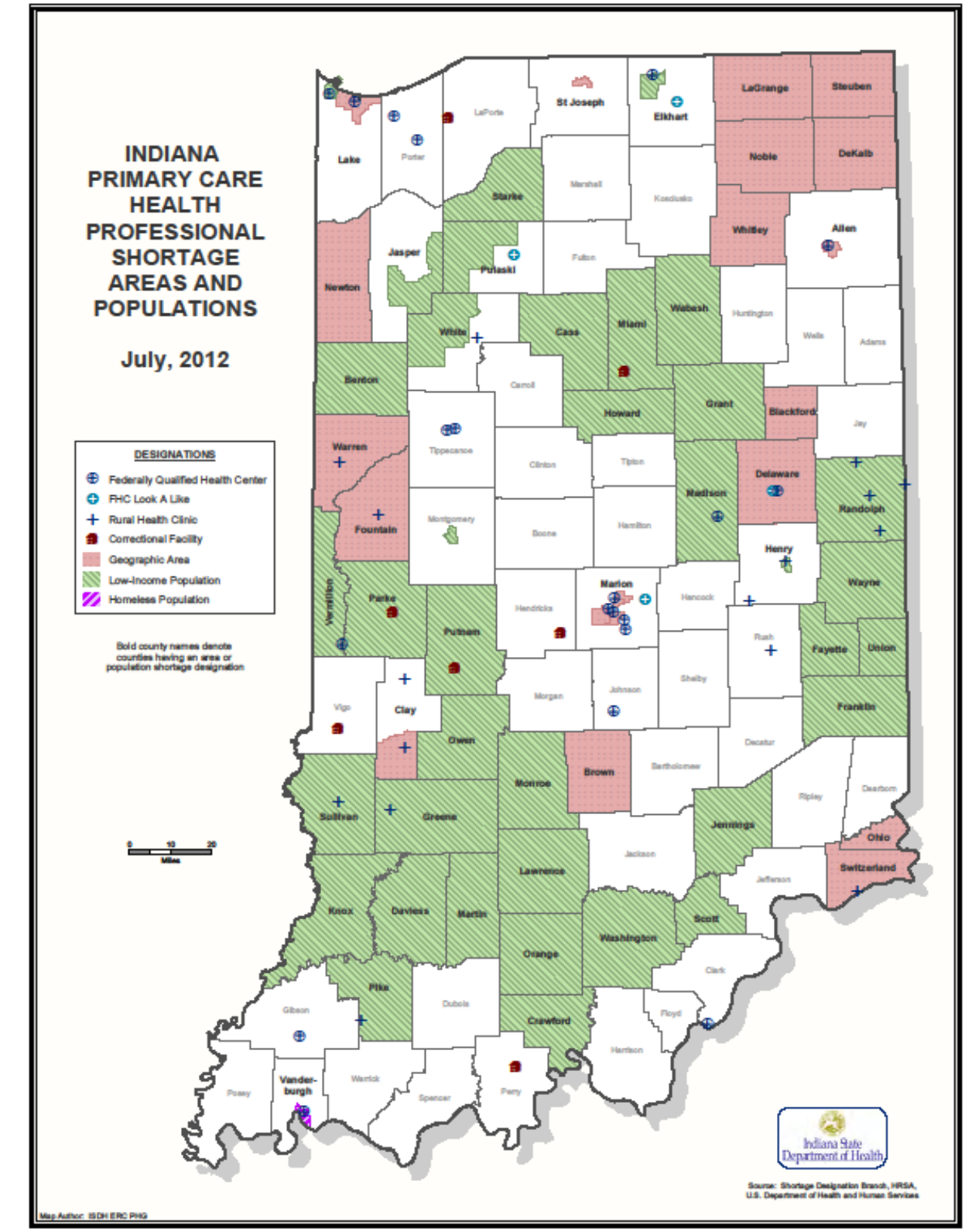
With a limited number of large urban areas, Indiana is primarily a rural state, with 70.6% (65) of Indiana counties having a population of less than 50,000. The table below includes the 2013 population and the change in population since 2010 for each county in Indiana. A map of the state showing which counties have Federally Qualified Health Centers (FQHCs) and/or Rural Health Clinics (RHCs) follows the table.

TABLE 1.2 INDIANA POPULATION BY COUNTY

COUNTY	2013 POPULATION	% CHANGE SINCE 2010	COUNTY	2013 POPULATION	% CHANGE SINCE 2010
Adams	34,614	+0.7%	Lawrence	45,844	-0.6%
Allen	363,014	+2.2%	Madison	130,482	-0.9%
Bartholomew	79,587	+3.6%	Marion	928,281	+2.8%
Benton	8,767	-1.0%	Marshall	47,109	+0.1%
Blackford	12,481	-2.2%	Martin	10,160	-1.6%
Boone	60,477	+6.8%	Miami	36,140	-2.1%
Brown	15,023	-1.4%	Monroe	141,888	+2.8%
Carroll	20,086	-0.3%	Montgomery	38,177	+0.1%
Cass	38,463	-1.3%	Morgan	69,782	+1.3%
Clark	112,938	+2.5%	Newton	14,087	-1.1%
Clay	26,803	-0.3%	Noble	47,570	+0.1%
Clinton	32,916	-0.9%	Ohio	5,994	-2.2%
Crawford	10,621	-0.9%	Orange	19,773	-0.3%
Daviess	32,407	+2.4%	Owen	21,201	-1.8%
Dearborn	49,904	-0.3%	Parke	17,202	-0.8%
Decatur	26,277	+2.1%	Perry	19,558	+1.1%
DeKalb	42,307	+0.2%	Pike	12,683	-1.3%
Delaware	117,484	-0.2%	Porter	166,557	+1.3%
Dubois	42,361	+1.1%	Posey	25,486	-1.6%
Elkhart	200,563	+1.5%	Pulaski	13,007	-2.9%
Fayette	23,861	-1.7%	Putnam	37,505	-1.2%
Floyd	76,244	+2.2%	Randolph	25,627	-2.1%
Fountain	16,880	-2.1%	Ripley	28,419	-1.4%
Franklin	22,951	-0.6%	Rush	17,004	-2.2%
Fulton	20,449	-1.9%	St. Joseph	266,709	-0.1%
Gibson	33,612	+0.3%	Scott	23,972	-0.9%
Grant	69,126	-1.3%	Shelby	44,729	+0.7%
Greene	32,781	-1.2%	Spencer	20,944	-0.0%
Hamilton	296,693	+8.1%	Starke	23,197	-0.7%
Hancock	71,575	+2.2%	Steuben	34,358	+0.5%
Harrison	39,163	-0.5%	Sullivan	21,223	-1.2%
Hendricks	153,879	+5.8%	Switzerland	10,526	-0.8%
Henry	49,044	-0.8%	Tippecanoe	180,174	+4.3%
Howard	82,760	+0.0%	Tipton	15,650	-1.8%
Huntington	36,791	-0.9%	Union	7,277	-3.2%
Jackson	43,466	+2.6%	Vanderburgh	181,398	+0.9%
Jasper	33,389	-0.3%	Vermillion	15,878	-2.1%
Jay	21,330	+0.4%	Vigo	108,291	+0.4%
Jefferson	32,458	+0.1%	Wabash	32,358	-1.6%
Jennings	28,241	-1.0%	Warren	8,415	-1.1%
Johnson	145,535	+4.2%	Warrick	61,049	+2.3%
Knox	37,954	-1.3%	Washington	27,780	-1.7%
Kosciusko	77,963	+0.8%	Wayne	67,893	-1.5%
LaGrange	37,996	+2.3%	Wells	27,814	+0.6%
Lake	491,456	-0.9%	White	24,466	-0.7%
LaPorte	111,281	-0.2%	Whitley	33,294	+0.0%

Source: US Census Bureau

FIGURE 1.1 INDIANA FQHCS AND RURAL HEALTH CLINICS



Source: ISDH

As shown in the table below, the 2012 median household income of Hoosiers was $46,974, compared to the national median household income of $51,371. This represents a 5.3% increase in median household income in Indiana since 2010.

Indiana's poverty rate was 15.6% in 2012. From 2010 to 2012, the percent of residents living in poverty increased from 15.3% to 15.6%, and the percent of children in poverty increased from 21.7% to 22.4%. The counties in the state with the highest poverty rates in 2010-2012 were Monroe (25.3%), Delaware (23.4%), Fayette (23.0%), and Tippecanoe (21.1%).

The Indiana unemployment rate (not seasonally adjusted) declined from 9.1% in October 2010 to 5.3% in October 2014. The counties in the state with the highest unemployment rates in October 2014 were Sullivan (7.3%), Lake (7.2%), Fayette (7.1%), Vermillion (6.9%), LaPorte (6.7%), Lawrence (6.7%), and Vigo (6.7%).

The percentage of Hoosiers without health insurance decreased from 14.8% in 2010 to 14.3% in 2012.

TABLE 1.3 SOCIOECONOMIC FACTORS

	INDIANA 2010	INDIANA 2012	U.S. 2012
Income			
Median household income	$44,613	$46,974	$51,371
Poverty Levels			
Percent living in poverty	15.3%	15.6%	15.9%
Percent under 18 living in poverty	21.7%	22.4%	22.6%
Unemployment			
Unemployment rate	9.1% (Oct 2010)	5.3% (Oct 2014)	5.5% (Oct 2014)
Uninsured			
Total	14.8%	14.3%	14.8%
Under 18 years	8.9%	8.4%	7.2%
18 to 64 years	20.1%	19.6%	20.6%
65 years and older	0.5%	0.5%	1.0%

Sources: US Census Bureau and Stats Indiana

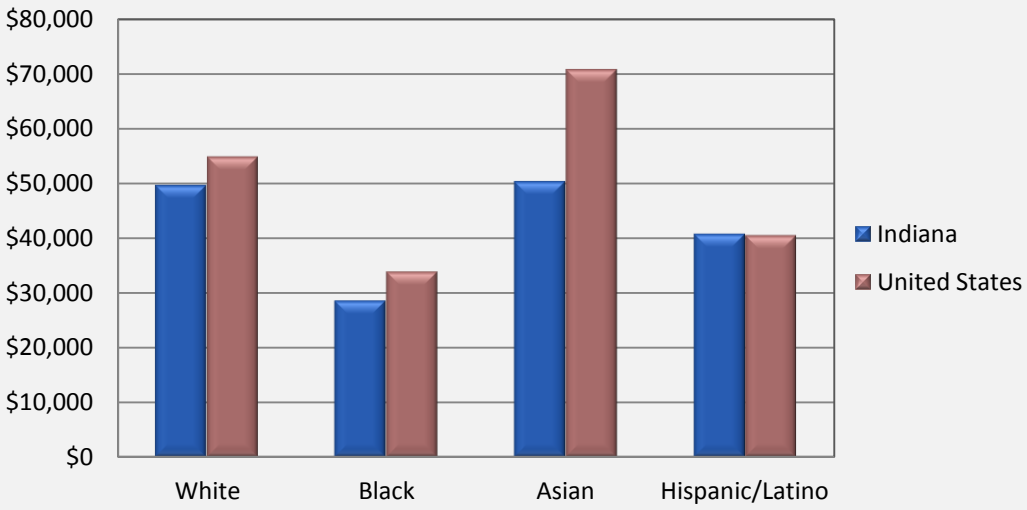
The table and figure below demonstrate additional significant differences in median household income among racial and ethnic groups.

TABLE 1.4 MEDIAN HOUSEHOLD INCOME BY RACE & ETHNICITY 2012

	INDIANA	U.S.
White	$49,669	$54,729
Black	$28,577	$33,764
Asian	$50,327	$70,644
Hispanic/Latino	$40,748	$40,417

Source: U.S. Census Bureau

FIGURE 1.2 MEDIAN HOUSEHOLD INCOME BY RACE & ETHNICITY 2012



Source: U.S. Census Bureau

In 2012, 12.4% of Hoosiers age 25 and over had not graduated from high school (or earned the equivalent GED), which represents a 2.9% decrease since 2010, as shown in the table below. Approximately 87.6% of the population in Indiana had a high school diploma or higher, and 23.4% had a bachelor's degree or higher.

TABLE 1.5 INDIANA EDUCATIONAL ATTAINMENT

	2010	PERCENT	2012	PERCENT
Population 25 years and over	4,229,798	100%	4,278,945	100%
Educational Level				
Less than 9th grade	176,191	4.2%	171,676	4.0%
9th to 12th grade, no diploma	372,087	8.8%	360,842	8.4%
High school graduate, including equivalency	1,521,860	36.0%	1,510,802	35.3%
Some college, no degree	884,620	20.9%	885,910	20.7%
Associate's degree	315,927	7.5%	347,606	8.1%
Bachelor's degree	617,193	14.6%	643,210	15.0%
Graduate or professional degree	341,920	8.1%	358,899	8.4%

Source: US Census Bureau

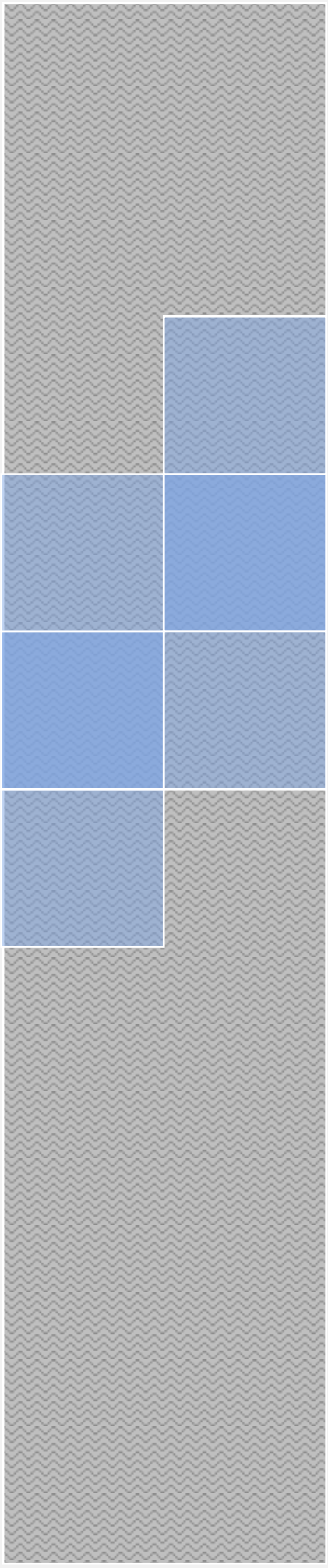
State health improvement planning in Indiana must take into account the racial, cultural, and linguistic diversity of the residents of Indiana, and the impact which educational level and economic status, rural residence or other factors may have on obtaining access to public health and health care services, as well as engaging in health promotion activities.

Significant demographic trends to consider in planning include:

- Substantial number of small, rural counties
- Aging of the state's population
- Growth of racial/ethnic minority populations
- Increase in poverty status
- Racial and ethnic disparities in median household income
- High school dropout rate

HEALTH CONDITIONS/HEALTH RISK FACTORS

This section presents information on morbidity, with data reflecting Indiana's population that is affected by selected conditions/risk factors. Some data, where noted, are derived from the Behavioral Risk Factor Surveillance System (BRFSS). BRFSS is a state-based computer-assisted telephone interviewing effort conducted in collaboration with the Centers for Disease Control and Prevention. Adults are randomly selected via telephone across Indiana and surveyed on a monthly basis. Survey questions are constructed to determine individual behaviors that may affect risk of developing chronic diseases that lead to premature mortality and morbidity and are useful in broad, population-based health improvement planning.



DISEASES OF THE HEART

Diseases of the heart remain the leading cause of death in Indiana, as well as across the U.S. Deaths due to this cause showed a decrease in both the number and the age-adjusted rate from 2006 (14,296/216.02) to 2012 (13,630/187.79). Over the past seven years, the prevalence of diseases of the heart in adults has remained unchanged.

TABLE 1.6 PREVALENCE OF HEART DISEASE 2006-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2006	5.3	(4.7-5.9)	4.1
2007	5.2	(4.6-5.8)	4.2
2008	5.0	(4.3-5.7)	4.2
2009	4.9	(4.3-5.5)	4.0
2010	4.6	(4.2-5.0)	4.2
2011*	4.8	(4.3-5.3)	4.4
2012*	5.5	(4.9-6.0)	4.5
2013*	5.2	(4.6-5.8)	4.3

**Not comparable to 2010 and earlier years*
Source: BRFSS

When residents of Indiana were asked if they had ever been told they had a heart attack (myocardial infarction or MI), BRFSS data revealed that for all age groups, Indiana rates were similar to the median representing the U.S. and Washington D.C.

TABLE 1.7 EVER TOLD YOU HAD A HEART ATTACK (MI) 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	1.5% (0.0-2.6)	0.8% (0.0-1.6)	1.0% (0.4-1.6)	4.2% (3.0-5.4)	7.5% (6.1-8.9)	14.5% (12.9-16.1)
Estimated Indiana Adult Population Affected	8,000	6,500	8,000	37,000	60,000	133,000
National Median % # States	0.0% 51	0.0% 51	1.6% 51	3.1% 51	6.5% 51	12.4% 51

Source: BRFSS

When asked if they had ever been told they had angina or coronary artery disease, Indiana BRFSS results reveal rates similar to the national average for all age groups.

TABLE 1.8 EVER TOLD YOU HAD ANGINA OR CORONARY ARTERY DISEASE 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	--	0.3% (0.0-0.7)	1.2% (0.6-1.8)	2.8% (1.8-3.8)	7.3% (5.9-8.7)	12.8% (11.4-14.2)
Estimated Indiana Adult Population Affected	--	2,500	9,800	25,000	59,000	116,000
National Median % # States	0.0% 51	0.0% 51	1.4% 51	3.1% 51	5.8% 51	12.3% 51

Source: BRFSS

CANCER

Malignant neoplasms (cancer) of all types were responsible for 13,349 deaths in Indiana in 2012, representing 23% of all deaths. It remains the second leading cause of death in the state. The age-adjusted mortality rate for cancer in Indiana was 184.14 per 100,000 population. The prevalence of cancer (excluding skin cancer) remained unchanged in adults from 2011-2013. Cancer prevalence questions were added to BRFSS beginning in 2011.

TABLE 1.9 PREVALENCE OF CANCER (EXCLUDING SKIN CANCER) 2011-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2011	6.3	(5.7-6.9)	6.6
2012	6.4	(5.9-7.0)	6.5
2013	6.2	(5.7-6.7)	6.7

Source: BRFSS

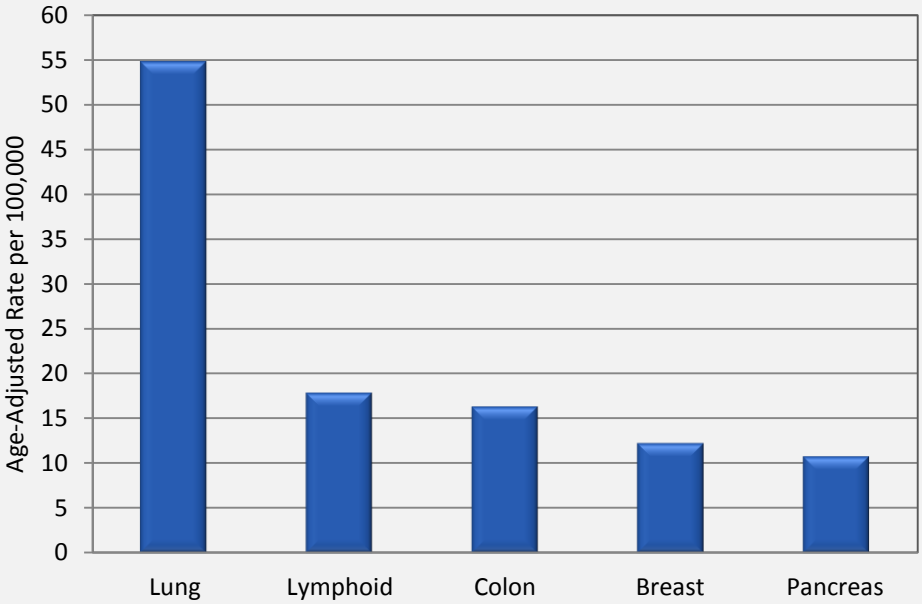
The incidence of cancer, measured as cases diagnosed per year, and the age-adjusted incidence rate of cancer per 100,000 decreased from 2007 to 2012.

TABLE 1.10 INCIDENCE OF CANCER 2007-2012

	2007	2008	2009	2010	2011	2012
Cancer incidence cases per year	31,028	31,322	32,861	32,743	31,323	30,460
Age-adjusted rate per 100,000	469.0	464.1	476.2	466.6	439.3	428.0

Source: ISDH Cancer Registry Report Generator accessed June 10, 2014

FIGURE 1.3 AGE-ADJUSTED DEATH RATES FOR FIVE LEADING CAUSES OF CANCER 2012



Source: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center

CEREBROVASCULAR DISEASES

In 2013, deaths from cerebrovascular diseases (stroke) were the fourth leading cause of death in Indiana, causing 5% of all deaths. Over the past seven years, the prevalence of stroke for adults ages 18 years and older has been stable.

TABLE 1.11 PREVALENCE OF CEREBROVASCULAR DISEASE 2006-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2006	2.7	(2.3-3.1)	2.6
2007	2.9	(2.5-3.3)	2.6
2008	2.8	(2.3-3.4)	2.6
2009	2.6	(2.3-3.0)	2.4
2010	2.9	(2.5-3.3)	2.7
2011*	3.4	(2.9-3.8)	2.9
2012*	3.4	(3.0-3.8)	2.9
2013*	3.1	(2.7-3.5)	2.8

**Not comparable to 2010 and earlier years*
Source: BRFSS

When residents of Indiana were asked if they had ever been told they had a stroke, Indiana's prevalence was similar to the national median.

TABLE 1.12 EVER TOLD YOU HAD A STROKE 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	0.2% (0.0-0.6)	0.4% (0.0-1.0)	1.2% (0.4-2.0)	2.4% (1.6-3.2)	4.3% (3.3-5.3)	8.6% (7.4-9.8)
Estimated Indiana Adult Population Affected	1,500	3,000	9,800	21,000	35,000	79,000
National Median % # States	0.0% 51	0.5% 51	1.4% 51	2.5% 51	3.9% 51	7.9% 51

Source: BRFSS

DIABETES

In 2012, there were 1,855 deaths of Indiana residents with diabetes mellitus designated as the underlying cause of death. Diabetes mellitus was the seventh leading cause of death, with an age-adjusted mortality rate of 25.82 per 100,000 population. The age-adjusted mortality rate by race was 24.18 for white and 48.08 for black residents. Indiana's adult diabetes prevalence was similar to the national median.

TABLE 1.13 PREVALENCE OF DIABETES 2006-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2006	8.1	(7.4-8.8)	7.5
2007	8.5	(7.7-9.3)	8.0
2008	9.6	(8.5-10.7)	8.3
2009	9.3	(8.6-10.0)	8.3
2010	9.8	(9.0-10.6)	8.7
2011*	10.2	(9.4-11.0)	9.5
2012*	10.9	(10.2-11.7)	9.7
2013*	11.0	(10.3-11.7)	9.7

**Not comparable to 2010 and earlier years*
Source: BRFSS

TABLE 1.14 EVER BEEN TOLD BY A DOCTOR YOU HAVE DIABETES 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	1.3% (0.0-2.7)	1.4% (0.6-2.2)	5.1% (3.7-6.5)	11.8% (10.0-13.6)	18.5% (16.5-20.5)	24.2% (22.4-26.0)
Estimated Indiana Adult Population Affected	8,000	11,000	42,000	105,000	150,000	225,000
National Median % # States	1.8% 51	2.0% 51	5.0% 51	9.6% 51	15.8% 51	20.9% 51

Source: BRFSS

BEHAVIORAL RISK FACTORS

OBESITY

Being obese is a risk factor for heart disease, cancer, stroke, and diabetes. Using the BRFSS, being obese is defined as a calculated body mass index greater than or equal to 30, based on self-reported height and weight (excluding unknown and refused responses). For all races and subgroups, the prevalence of obesity remained steady from 2006 to 2013. However, due to the inclusion of cell phone households and a new weighting methodology, the prevalence for 2011-2013 is not comparable to previous years.

TABLE 1.15 PREVALENCE OF OBESITY 2006-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2006	27.8	(26.4-29.2)	25.1
2007	27.4	(25.8-29.0)	26.3
2008	27.0	(25.2-28.8)	26.7
2009	30.0	(28.6-31.4)	26.9
2010	30.2	(28.8-31.6)	27.5
2011*	30.8	(29.5-32.2)	27.8
2012*	31.4	(30.0-32.8)	27.6
2013*	31.8	(30.6-33.0)	29.4

**Not comparable to 2010 and earlier years*
Source: BRFSS

TABLE 1.16 ADULTS CONSIDERED OBESE 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	19.7% (15.8-23.6)	29.2% (25.7-32.7)	32.8% (29.5-36.1)	38.8% (36.1-41.5)	37.1% (34.6-39.6)	30.7% (28.7-32.7)
Estimated Indiana Adult population affected	127,000	220,000	255,000	330,000	290,000	273,000
National Median % # States	15.6% 50	27.5% 51	32.7% 51	34.1% 51	34.6% 51	26.7% 51

Source: BRFSS

TOBACCO USE

Tobacco use is also a well-known risk factor for heart disease, cancer, stroke, and diabetes. Using the BRFSS, questions included whether respondents were currently smoking. The overall prevalence of smoking in 2013 was significantly lower than the prevalence in 2011. However, due to the inclusion of cell phone households and a new weighting methodology, the prevalence 2011-2013 is not comparable to previous years. For most age groups smoking rates in Indiana remained higher than the national median.

Smoking impacts some populations more than others: 37.6% of adults with less than a high school education were current smokers, compared to 9.0% of adults with a college education. Thirty eight percent of adults with household incomes less than $15,000 were current smokers compared to 10.2% of those with household income of $75,000 or greater.

In 2012, Indiana had one of the highest rates of smoking during pregnancy (16.5%) of the 38 states and District of Columbia that utilize the 2003 revision of the U.S. Standard Certificate of Live Birth.

TABLE 1.17 PREVALENCE OF SMOKING 2006-2013

Year	Indiana Percentage	Indiana Confidence Interval	National Median Percentage
2006	24.1	(22.7-25.5)	20.1
2007	24.1	(22.5-25.7)	19.8
2008	26.0	(24.0-28.1)	18.4
2009	23.1	(21.7-24.5)	17.9
2010	21.2	(19.9-22.5)	17.3
2011*	25.6	(24.3-27.0)	21.2
2012*	24.0	(22.8-25.2)	19.6
2013*	21.9	(20.7-23.1)	19.0

**Not comparable to 2010 and earlier years*
Source: BRFSS

TABLE 1.18 ADULTS WHO ARE CURRENT SMOKERS 2013

	18-24	25-34	35-44	45-54	55-64	65+
Indiana % CI	19.7% (16.0-23.4)	29.5% (26.0-33.0)	28.6% (25.5-31.7)	26.2% (23.7-28.7)	19.4% (17.4-21.4)	9.6% (8.4-10.8)
Estimated Indiana Adult Population Affected	130,000	235,000	225,000	230,000	155,000	87,000
National Median % # States	19.7% 51	25.5% 51	21.2% 51	22.4% 51	17.9% 51	8.7% 51

Source: BRFSS

PATIENT SAFETY AND MEDICAL ERROR REPORTING

The Indiana State Department of Health collects and reports medical errors for six reportable events in hospitals and surgical centers in the state. While some events appear to have improved from 2008 to 2013, reportable events of surgical errors and products/devices have not shown improvement. Therefore, patient safety remains of paramount concern in terms of health improvement planning in the state.

TABLE 1.19 MEDICAL ERRORS REPORTING BY TYPE OF REPORTABLE EVENT 2008-2013

Reportable Event	2008	2009	2010	2011	2012	2013
Surgical	48	51	50	40	41	48
Products or devices	3	5	1	0	11	3
Patient protection	4	2	1	2	2	0
Care management	42	27	36	44	30	48
Environmental	8	9	18	12	16	12
Criminal	0	0	1	2	0	0

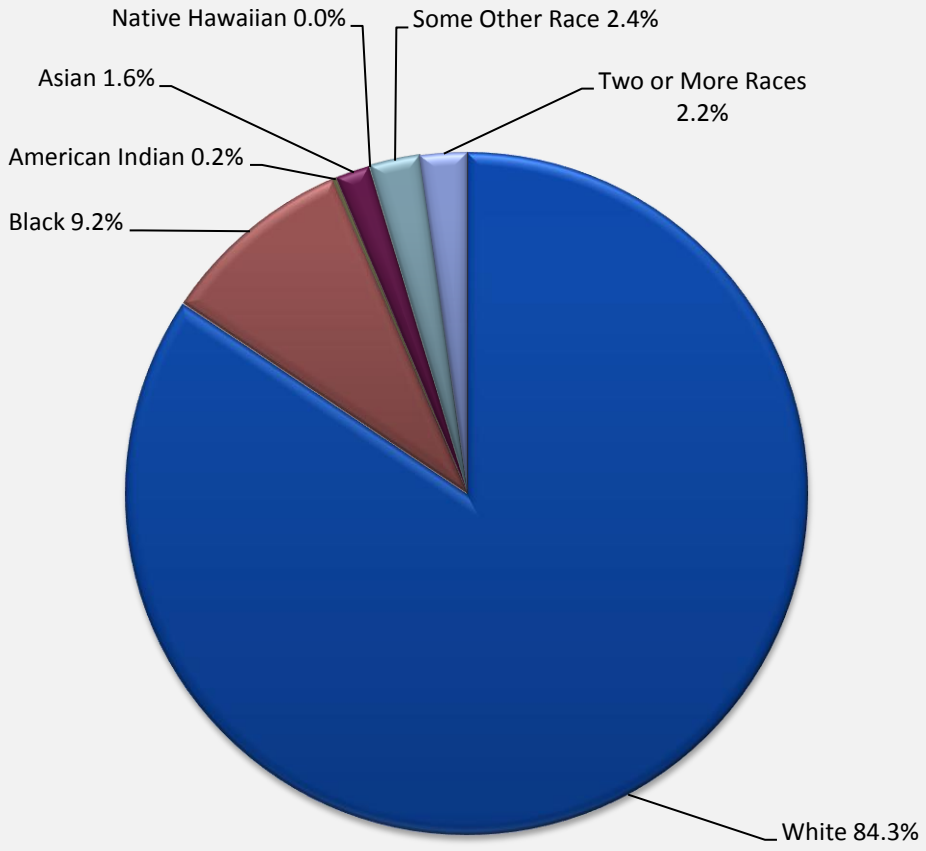
Source: ISDH

MEASURING HEALTH STATUS IN INDIANA

LEADING HEALTH INDICATORS

This section provides an overview of the leading issues that affect the health status of residents of Indiana. The health status of the state is a description of the health of its population. The information used to report health status comes from a variety of sources, including birth and death records; hospital discharge data; and health information collected from health care records, personal interviews, physical examinations, and telephone surveys.

FIGURE 1.4 ESTIMATED 2013 POPULATION BY RACE



Source: US Census Bureau

TABLE 1.20 HEALTH STATUS INDICATORS

HEALTH STATUS INDICATORS	WHITE	BLACK	TOTAL
Live Births (2012)	67,864	10,043	83,250
Percent Preterm Births (2012)	9.1	13.3	9.6
Infant Mortality Rate Per 1,000 Live Births (2012)	5.5	14.5	6.7
Percent Births to Mothers Receiving Prenatal Care in First Trimester (2012)	70.7	57.4	68.4
Infant Deaths (2012)	371	146	556
Percent of Adults Smoking (2013)	22.0	24.8	21.9
Percent of Adults Considered Obese Based on BMI (2013)	30.6	41.6	31.8
Cancer Incidence Per 100,000 (2012)	425.9	430.8	428.0
Number of Total Deaths from All Causes (2012)	53,913	4,614	59,168
Age-Adjusted Death Rate for All Causes Per 100,000 Population (2012)	812.91	953.15	825.22
Heart Disease Age-Adjusted Death Rate Per 100,000 Population (2012)	185.57	217.47	187.79
Cancer Age-Adjusted Death Rate Per 100,000 Population (2012)	181.68	223.22	184.14
Cerebrovascular Diseases Age-Adjusted Death Rate Per 100,000 Population (2012)	41.86	46.42	42.53

Source: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center

LEADING CAUSES OF DEATH

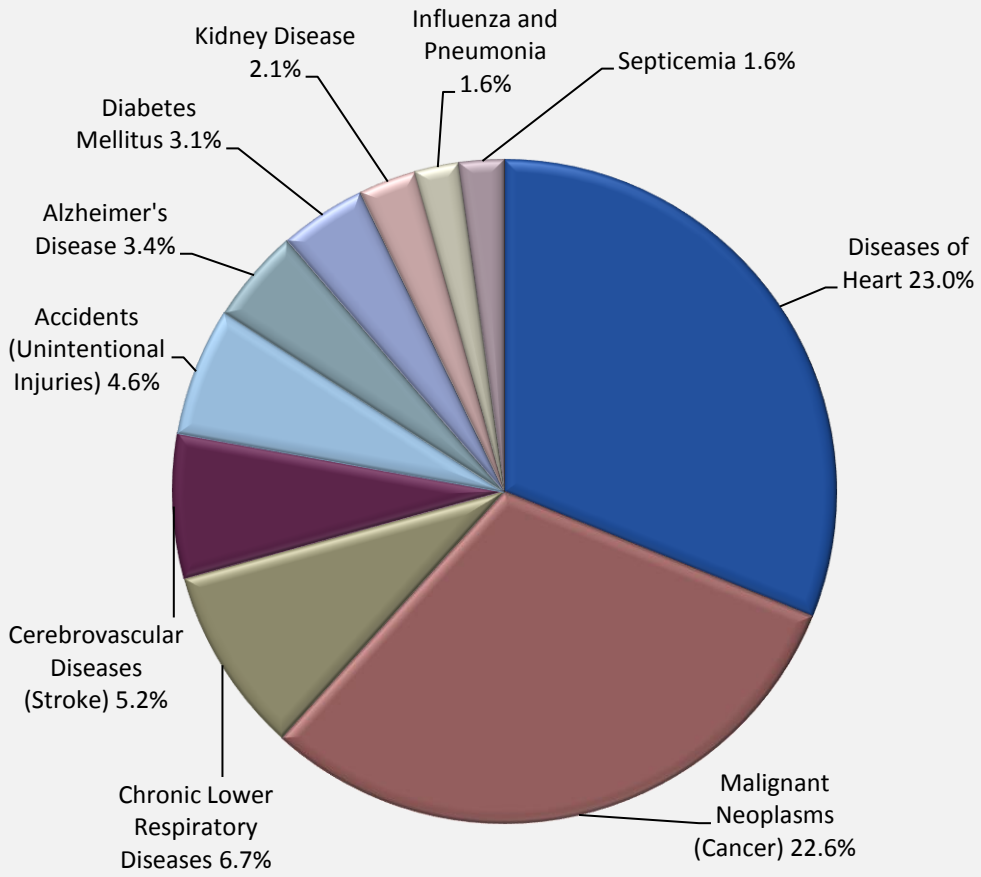
Ranking the leading causes of death is one way of tracking those conditions that affect the population the most at any moment in time. Although cause-of-death is only one indicator of the health status of a given population, it is the most significant and severe indicator, and is therefore included in considering health priorities. Leading cause of death and leading morbidities vary by multiple factors, including age, race/ethnicity, gender, income, geographic location and access to healthcare resources.

TABLE 1.21 TEN LEADING CAUSES OF DEATH IN INDIANA 2012

Cause of Death	Number	Percentage
Diseases of Heart	13,630	23.0
Malignant Neoplasms (Cancer)	13,349	22.6
Chronic Lower Respiratory Diseases	3,955	6.7
Cerebrovascular Diseases (Stroke)	3,061	5.2
Accidents (Unintentional Injuries)	2,749	4.6
Alzheimer's Disease	2,035	3.4
Diabetes Mellitus	1,855	3.1
Kidney Disease	1,220	2.1
Influenza and Pneumonia	972	1.6
Septicemia	947	1.6

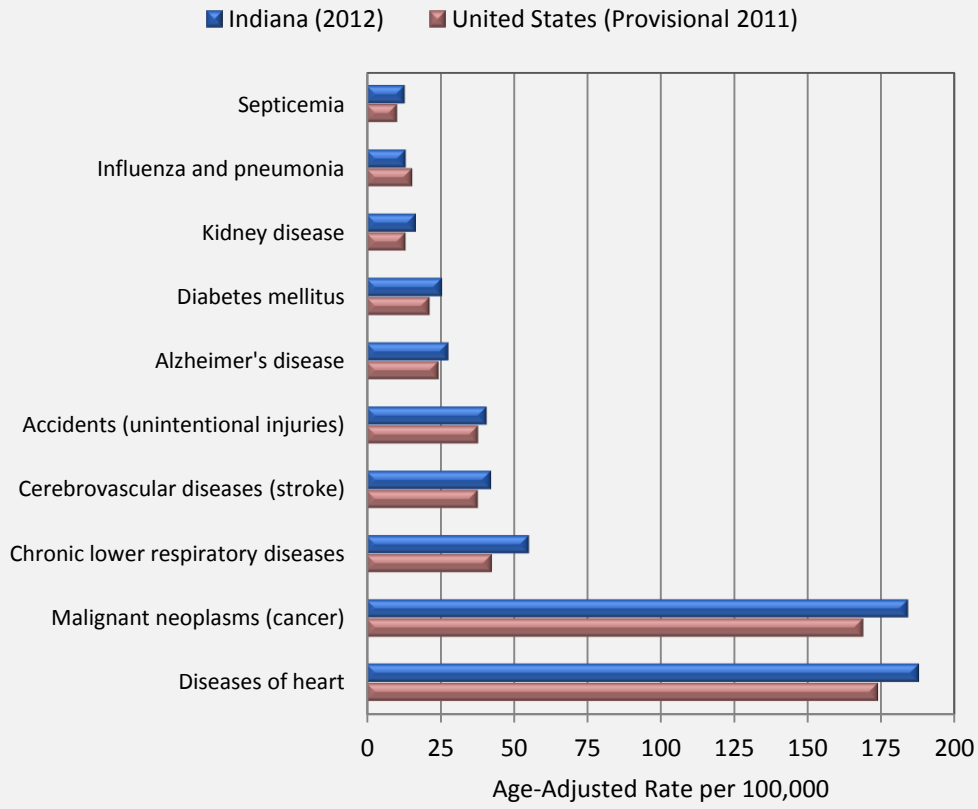
Source: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center

FIGURE 1.5 TEN LEADING CAUSES OF DEATH IN INDIANA 2012



Source: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center

FIGURE 1.6 COMPARISON OF AGE-ADJUSTED DEATH RATES (INDIANA AND U.S.) FOR TOP TEN LEADING CAUSES OF DEATH



Sources: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center
National Center for Health Statistics

YEARS OF POTENTIAL LIFE LOST BEFORE AGE 65

Years of Potential Life Lost (YPLL) is a measure of premature death. YPLL is an indicator that the younger the age of a person at death, the more years of potential life lost. Therefore, this indicator can be a useful indicator at the population level about the impact of early deaths and loss of contribution to society. The leading causes of death and the years of life lost for each are shown below.

TABLE 1.22 YEARS OF POTENTIAL LIFE LOST 2011

Cause of Death	Indiana YPLL	% Total YPLL	National % YPLL
Accidents/Unintentional Injuries	49,283	18.6	19.4
Malignant Neoplasms	42,525	16.1	16.4
Heart Disease	34,059	12.9	12.1
Perinatal Period	19,367	7.3	7.0
Suicide	18,464	7.0	7.1
Congenital Anomalies	13,080	4.9	3.9
Homicide	9.989	3.8	4.7
Liver Disease	5,554	2.1	2.5
Chronic Lower Respiratory Diseases	5,504	2.1	2.0
Diabetes Mellitus	5,211	2.0	2.1
All Other Causes	63,331	23.2	22.8
Indiana Total	**258,717**	**100%**	**N/A**

Source: National Center for Health Statistics, Vital Statistics Systems (via WISQARS) (Accessed June 17, 2014)

INFANT MORTALITY

Over the last decade, infant mortality rates in Indiana have ranged from 6.9 in 2008 to 8.1 in 2004. White infant mortality rates demonstrate a similar trend, from 5.5 in 2008 to 6.9 in 2004, 2005 and 2011. Black infant mortality rates however, continue to reveal significant disparities. Although overall black infant mortality rates have ranged from 12.3 to 18.1 during the last 10 years, they have been nearly double the white rates, which is a significant concern in Indiana. The neonatal period remains paramount with regard to efforts to reduce infant mortality in the state, as a significant number of infant deaths during this period may be prevented with preconception and prenatal care.

TABLE 1.23 INFANT MORTALITY RATES, INDIANA 2003-2012

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total	**7.4**	**8.1**	**8.0**	**7.9**	**7.5**	**6.9**	**7.8**	**7.5**	**7.7**	**6.7**
White	6.4	6.9	6.9	6.4	6.5	5.5	6.4	6.0	6.9	5.5
Black	15.9	17.1	16.9	18.1	15.7	14.9	16.1	14.7	12.3	14.5

Rates per 1,000 live births
Source: Indiana State Department of Health, Data Analysis Team, Epidemiology Resource Center

SECTION 2: HEALTH PRIORITIES

FRAMEWORK

The six health priorities addressed in this plan (reduce the prevalence of obesity, reduce the prevalence of tobacco usage, reduce infant mortality, assure food safety, reduce healthcare-associated infections, and reduce the burden of HIV, STDs, and viral hepatitis) were arrived at by considering the prevalence of morbidity and mortality in Indiana coupled with selected public health priorities identified by the Centers for Disease Control and Prevention (CDC), also known as the CDC Winnable Battles. Once these priorities were identified, the Executive Committee considered them in light of the 10 essential services of public health.

Therefore, all activities associated with the intended outcomes for the six health priorities were divided into two major categories 1) health promotion and 2) access to care. They were then further segmented categories related to system change, health communication, community intervention, or other. The activities were based on whether they pertained to primary, secondary and/or tertiary prevention. For the sake of efficiency and to avoid duplication, all outcomes, activities and responsible partners were derived from already existing ISDH improvement plans for the majority of the six Indiana health priorities.

Outcomes in the tables in each priority area have been color-coded to indicate the degree of progress:

- **Green** = Good Progress
- **Yellow** = Some Progress
- **Red** = No Progress

HEALTH PRIORITY: INCREASE THE NUMBER OF HOOSIERS AT A HEALTHY WEIGHT

GOAL: To reduce the prevalence of adult obesity in Indiana from 30.8% in 2011 to 27.0% by 2016.

INDIANA STATE HEALTH IMPROVEMENT PLAN
Partnering for the Public's Health

Over the past three decades, the impact and prevalence of overweight and obesity have increased at an alarming rate. According to 2013 BRFSS and 2011YRBS data for Indiana, over 30% of adolescents and 66% of adults are overweight or obese. Poor nutrition and sedentary behaviors are contributing to this epidemic. Fewer than half of Indiana adults meet the recommendations for weekly aerobic exercise.

Many factors lead to sedentary behaviors and poor eating habits, which can result in obesity and chronic disease. While it is true that, overall, Indiana residents often fail to consume the recommended amounts of fruits and vegetables or engage in the recommended amounts of daily physical activity—two behaviors directly linked to weight and overall good health and well-being—many other factors can impact weight. The places where we live, learn, work, and play influence our access to healthy food and/or our opportunities for physical activity.

A key milestone in Indiana's efforts to improve its health outcomes was the launch of Governor Mitch Daniels' health initiative, INShape Indiana (INShape), in July 2005. INShape began with a website to provide Indiana residents with information on nutrition, physical activity, and tobacco cessation to help them engage in healthier behaviors. The strength of INShape lies in the many partnerships it has created or inspired over the years.

As a result, the groundwork has been laid for Indiana to focus more on addressing overweight and obesity through policy and environmental change that make healthy eating and active living possible. The Indiana Healthy Weight Initiative is Indiana's public health response to the growing need and desire for more communities and settings that support good nutrition and physical activity for all of Indiana's residents. The Initiative seeks to enhance the health and quality of life for all Indiana residents by promoting good nutrition, regular physical activity, and a healthy weight through policy, environment, and lifestyle change.

Out of the Healthy Weight Initiative came a blueprint for tackling Indiana's obesity epidemic. Academics, practitioners, professionals, and lay people from throughout Indiana worked together to create *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010-2020 (Plan).* Additionally, workgroups on topics ranging from early childhood to older adults meet regularly to evaluate the litany of objectives and measures included in the *Plan*.

Now, almost five years later, Indiana is still working towards the goals of the *Plan* and is proud to be well on the way to accomplishing many of the prescribed objectives. This roadmap has served Indiana well and will continue to outline the direction of the Indiana State Department of Health, INShape Indiana, and the Indiana Healthy Weight Initiative to ensure another five years of meaningful, collective impact.

In 2013, the Division of Nutrition and Physical Activity and the Division of Chronic Disease Prevention and Control, Primary Care and Rural Health was awarded a five-year, multi-million dollar grant from the Centers for Disease Control and Prevention. The purpose of this grant is to coordinate efforts to prevent, identify, and help control chronic disease across Indiana. The activities in the grant, along with the measures found in this document, were informed and influenced by the *Plan.* This funding allows ISDH to implement many of the recommended activities through statewide partnerships. Additionally, the funding allows for a sharper focus on evaluation. Outcomes listed below have been reworded to make them measurable through evaluation.

Changes in Survey Methodology

In 2011, the Behavioral Risk Factor Surveillance System, (BRFSS) changed the manner in which it collects data by adding cell phone surveillance to its traditional method of surveying via home phones. Although this was a welcome addition, the change in methodology does not allow for the comparison of data collected before 2011 and data collected afterward. Because many chronic disease measures are captured using the BRFSS, many of the original data points in this ISHIP document were changed to reflect a 2011 'starting point' instead of the original 2009. Those data points *not* captured by BRFSS (such as the Youth Risk Behavior Survey and the Immunization Survey) maintain the 2009 starting point. Additionally, as the BRFSS has evolved, the manner in which some questions are worded has changed. (For example, fruit and vegetable questions are now separated into servings, not recommended daily amounts.) Although the spirit of the question has remained the same, the change in wording has been edited in this updated edition to reflect the latest data.

Changes in the Environment and New Partners

Although there have been no significant policy changes in Indiana regarding obesity care or prevention, there *has* been push for obesity prevention on the

Federal level. Initiatives such as Michelle Obama's Let's Move campaign, pledges by national foodservice organizations to cut calories and dramatic changes to the National School Lunch Program are starting to be implemented. ISDH is partnering with the Department of Education to work intensively with 18 school corporations. With a grant from the CDC, ISDH will help train school wellness champions on the new Smart Snacks guidelines, best practices for physical activity and nutrition, and care for kids with chronic conditions.

New partners such as the Farm to School network, JumpIN for Healthy Kids and the YMCA's Top 10 by 25 coalition are essential for not only bringing partner groups together, but to also be a driving force for change. As a complement to the established Indiana Healthy Weight Initiative, these partner organizations have the ability to nimbly focus on one issue, or reach to a broad base statewide.

Health Disparities

National findings reveal that significant geographic, income, and ethnic disparities persist; obesity rates are highest in the South and among Blacks, Latinos, and lower-income, less educated Americans. As reflected in the 2013 BRFSS results, there is a stark difference in the prevalence of obesity in the white population when compared to minority populations. In Indiana, the adult obesity rate for Blacks is 42.5% and 33.2% for Latinos as compared to 30.8% for the White population. The indicators that exacerbate weight gain in the general population (poor access to healthy food, few opportunities for physical activity, and increased consumption of calorie-dense foods) seem to be magnified in lower income, less educated populations. Programming funded through the Office of Minority Health addresses this issue directly; however, more work must be done to focus resources on helping minorities directly.

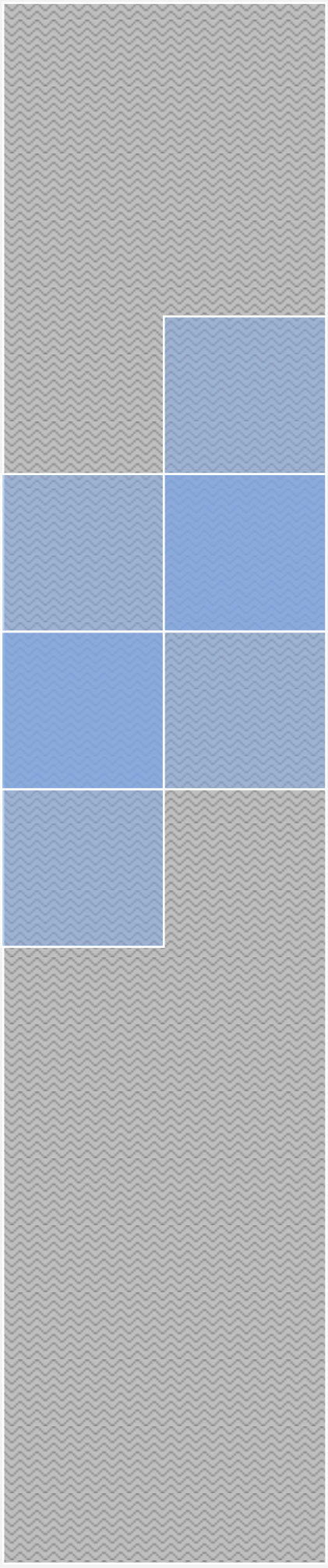
Economic Impact

The excess direct medical cost attributable to obesity among Indiana adults is estimated to be $3.9 billion, with 36.9% of those expenditures financed by Medicare and Medicaid. On average, healthcare costs for obese individuals are approximately $1400 higher than their normal weight peers. An obese child costs Medicaid $6730, as opposed to $2446 for an average weight child. Additionally, obese children are absent from school two more days than normal-weight classmates; obesity is a better predictor of absenteeism

than any other factor. Lastly, Indiana ranks 10th in the nation for the highest spending on healthcare—which equates to $400 more per person each year than the national average. [1,2,3]

Looking Forward

In 2014, Indiana is poised to tackle obesity head on through policy, systems and environmental changes. With the benefit of time to examine strategies, ISDH will sharpen its focus on proven strategies, encourage partners to follow *Plan* objectives, and continue along the path of collective impact. Additionally, stronger emphasis on both qualitative and quantitative evaluation will help inform ISDH on the optimal approach for moving forward.



[1] (Finkelstein, Trogdon, Cohen, & Dietz, 2009)
[2] (Solberg, Maciosek, Edwards, Khanchandani, & Goodman, 2006)
[3] (Trogdon, Finkelstein, Feagan, & Cohn, 2012)

Increase Hoosiers at a Healthy Weight

GOAL 1: Increase access to and consumption of healthy foods and beverages.

GOAL 2: Increase opportunities for and engagement in regular physical activity.

GOAL 3: Increase efforts aimed at enabling people to achieve and maintain a healthy weight across the lifespan.

GOAL 4: Reduce environmental and policy-related disparities for breastfeeding, nutrition, physical activity, overweight, obesity, and chronic disease.

GOAL 5: Increase the capacity of communities and settings within those communities (e.g., schools, worksites, faith-based organizations, etc.) to develop and sustain environmental and policy support systems that encourage healthy eating and active living.

GOAL 6: Increase state and local strategic partnerships to more effectively coordinate efforts, share resources, and identify and reach priority populations.

Taken from *Indiana's Comprehensive Nutrition and Physical Activity Plan, 2010-2020 (the State Obesity Plan)*

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Increase the number of "Baby Friendly" designated hospitals from 3 in 2009 to 20 by 2020. (2014: 6)	Sponsor learning collaborative with Indiana hospitals that are on their way to achieving the Baby Friendly Designation. Collaborative will provide technical assistance, peer to peer learning opportunities and professional support.	Indiana Perinatal Network; Indiana hospitals participating in the collaborative.
		Increase the percentage of childcare facilities in Paths to Quality or receiving CCDF reimbursement that have official policies for nutrition, physical activity and television watching from 0% in 2014 to 25% by 2016.	Add nutrition, physical activity, and television viewing recommendations for early childhood settings into the formal and non-formal Child Development Associate (CDA) training. Include standard nutrition, physical activity, and television viewing requirements in the Paths to QUALITY (PTQ) rating system standards. Submit standards with criteria to the FSSA, Bureau of Child Care, for review and consideration Set standards for nutrition, physical activity, and television viewing. Provide training and technical assistance to help early child and education providers comply with the new standards. Include basic nutrition and physical activity requirements for unlicensed childcare providers in the Child Care and Development Fund (CCDF) voucher program provider eligibility standards.	Organizations and colleges statewide offering training courses for the CDA National Credential, Indiana AEYC, ISDH, FSSA, Cooperative Extension Service, Nutritionists, IACCRR, Early care and education providers, policymakers, and other key leaders

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Increase the number of elementary schools that are required to provide at least 30 minutes of physical activity a day from 75 in 2014 to 150 by 2016.	Collect and share success stories and effective strategies from schools and school corporations that provide active, daily recess and incorporate physical activity into lesson plans. Provide information and resources to school board members, CSHAC members, school personnel, and parents on the relationship between physical activity, health, and academic performance and how to incorporate physical activity throughout the school day.	State Obesity Prevention Plan partners, including but not limited to: schools, ICC, IDOE, ISDH, and Indiana School Health Network
		Increase the number of Complete Streets policies at the MPO and/or local level from 3 in 2011 to 14 by 2016. (2014: 12)	Adopt and implement Complete Streets through a variety of methods that may include executive orders from elected officials, internal memos from directors of transportation agencies, inclusion in comprehensive plans, rewrite of design manuals, and/or ordinances and resolutions.	Health by Design, Indiana AARP, MPOs, local planners and engineers, ISDH, and local elected officials
	Health Communications			

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Community Interventions**	Increase the number of licensed childcare centers, licensed childcare homes, and unlicensed, registered ministries taking the Taking Steps to Healthy Success training from 47 in 2014 by 50 facilities each year to 247 by 2018.	Contract with IACCRR to enhance funding to provide technical assistance to those childcare centers trained in Taking Steps to Healthy Success.	IDOE, FSSA, IACCRR, and ISDH
		Increase by at least 20 rural schools and 10 urban the number of schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours from 435 total schools in 2014 to 495 total schools in 2016.	Collect and share information on effective protocols and successful strategies for joint use agreements to allow the use of schools for recreation by the public during non-school hours. Provide training to school personnel and community organizations on developing partnerships, facilities, and risk-management plans to support the public use of school facilities for physical activity.	State Obesity Prevention Plan partners, including but not limited to: ISDH, schools, and community-based organizations
		Increase the number of farmers markets statewide licensed to accept Supplemental Nutrition Assistance Program (SNAP) benefits (e.g., Hoosier Works card) from 40 in 2009 to 50 in 2016. (2013: 46)	Provide training and technical assistance to assist farmers markets with the licensing process to accept the Hoosier Works card and to successfully implement and promote the acceptance of SNAP.	ISDH, FSSA, Indiana Department of Agriculture, Purdue University Cooperative Extension Service, and the Indiana Cooperative Development Center

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	Other	Increase the percentage of black mothers who initiate breastfeeding from 51% in 2009 to 57% by 2016. (2012: 61.1%)	Launch a social marketing campaign to promote early, exclusive and continued breastfeeding among black mothers.	ISDH, IPN, Black Breastfeeding Coalitions, and State Obesity Prevention Plan Partners
		Increase the percentage of mothers who breastfeed their babies exclusively at 3 months from 29% in 2009 to 40% by 2020. (2013: 27.7%)	Implementation of the State Obesity Prevention Plan strategies and other selected evidence-based interventions that are successful in practice. Improve maternity care practices in hospitals.	State Obesity Prevention Plan partners, including but not limited to: ISDH, IPN, local breastfeeding coalitions, and Indiana hospitals and birth centers providing maternity care
		Increase the percentage of mothers who breastfeed their babies at 6 months to from 37.3 % in 2009 to 50% by 2020. (2013: 37.7 %)		
		Increase the percentage of mothers who breastfeed their babies at 12 months to from 18.9% to 25% by 2020. (2013: 16.5%)		

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Other**	Increase the percentage of adults who meet the recommended amounts of physical activity per day from 46% in 2011 to 49% by 2020. (2013: 44.0%) Increase the percentage of high school students who meet the recommended amounts of physical activity per day from 41% in 2009 to 55% by 2020. (2011: 43.5%) Decrease the percentage of high school students who drank a can, bottle, or glass of soda or pop 1 or more times per day during the past 7 days from 30% in 2009 to 22% by 2020. (2011: 28.5%) Decrease the percentage of adults who consumed less than 1 fruit per day from 37.7% in 2009 to 35% by 2020. (2013: 39.6%) Decrease the percentage of adults who consumed less than 1 vegetable per day from 26.8% to 24% by 2020. (2013: 26.3%) Increase the percentage of high school students who eat the recommended amounts of fruits and vegetables from 16% in 2009 to 21% by 2020. (2011: 14.7%)	Implementation of the State Obesity Prevention Plan strategies and other selected evidence-based interventions that are successful in practice. Maintain and enhance state and local infrastructure to implement priority nutrition and physical activity policies and environmental changes across all settings and special populations. Educate on the need for adequate funding and resources for nutrition, physical activity, and obesity prevention interventions. Provide information to policymakers and other key leaders on the importance of changing policies and environments to create healthier communities and settings. Maintain a surveillance system and evaluation activities to monitor and track progress.	State Obesity Prevention Plan partners, including but not limited to: ISDH, other state agencies, state coalitions, local health departments, state and local policy-makers, academia, health organizations, community-based organizations, and local communities

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Other**	By 2016, establish a system for childhood obesity surveillance using annual statewide, surveillance tracking system. (Baseline: no system exists)	Maintain an interagency collaboration between the IDOE and ISDH to support annual school-based body mass index (BMI) collection and reporting. Provide information to school board members, CSHAC members, school personnel, and parents on the importance and benefits of measuring and reporting student BMIs. Explore options outside of school settings in which to capture and report a child's height and weight.	IDOE, IHWI, Indiana School Health Network, Indiana Association of School Nurses, ISDH, Statewide health systems.

Increase Hoosiers at a Healthy Weight

		PRIMARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**	By 2016, develop and disseminate a protocol for use by health care providers to integrate obesity prevention into office practice. (Baseline: no standard protocol recommended at this time)	Identify and/or develop a protocol for the prevention and assessment of overweight/obesity; promote the use of existing resources such as *Exercise Is Medicine* prescription, *Ounce of Prevention 12 Well-Child Visit* prescriptions, and the American Academy of Pediatrics (AAP) *Healthy Active Living* prescription. Provide training and technical assistance to health care providers and office staff to ensure the effective integration of obesity prevention into office practice.	State Obesity Prevention Plan partners, including but not limited to: local chapters of the AAP, AAFP, Nurses Associations, other professional associations representing health professionals, and individual health care providers
	Health Communications			
	Community Interventions			
	Other			

Increase Hoosiers at a Healthy Weight

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions			

Increase Hoosiers at a Healthy Weight

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Other**	Increase the percentage of adults who are at a healthy weight from 32.4% in 2009 to 36% by 2016. (2013: 31.1%) Increase the percentage of high school students who are at a healthy weight from 71% in 2009 to 73% by 2016. (2011: 66.6%) Increase the percentage of adults who meet the recommended amounts of aerobic physical activity per day from 46% in 2011 to 49% by 2020. (2013: 44.0%) Increase the percentage of high school students who meet the recommended amounts of physical activity per day from 41% in 2009 to 55% by 2020. (2011: 43.5%) Decrease the percentage of high school students who drank a can, bottle, or glass of soda or pop 1 or more times per day during the past 7 days from 30% in 2009 to 22% by 2020. (2011: 28.5%) Decrease the percentage of adults who consumed less than 1 fruit per day from 37.7% in 2011 to 35% by 2020. (2013: 39.6%) Decrease the percentage of adults who consumed less than 1 vegetable per day from 26.8% in 2011 to 24% by 2020. (2013: 26.3%) Increase the percentage of high school students who eat the recommended amounts of fruits and vegetables from 16% in 2009 to 21% by 2020. (2011: 14.7%)	Implementation of the State Obesity Prevention Plan strategies and other selected evidence-based interventions that are successful in practice. Maintain and enhance state and local infrastructure to implement priority nutrition and physical activity policies and environmental changes across all settings and special populations. Educate on the need for adequate funding and resources for nutrition, physical activity, and obesity prevention interventions. Provide information to policymakers and other key leaders on the importance of changing policies and environments to create healthier communities and settings. Maintain a surveillance system and evaluation activities to monitor and track progress.	State Obesity Prevention Plan partners, including but not limited to: ISDH, other state agencies, state coalitions, local health departments, state and local policymakers, academia, health organizations, community-based organizations, and local communities

Increase Hoosiers at a Healthy Weight

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**	By 2015, develop and disseminate a protocol for use by health care providers to integrate obesity prevention into office practice. (Currently do not have baseline data)	Provide training and technical assistance to health care providers and office staff to ensure the effective integration of obesity prevention into office practice.	State Obesity Prevention Plan partners, including but not limited to: local chapters of the AAP, AAFP, Nurses Associations, other professional associations representing health professionals, and individual health care providers
	Health Communications			
	Community Interventions			
	Other			

Increase Hoosiers at a Healthy Weight

		TERTIARY PREVENTION		
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other	Decrease the percentage of adults who are obese from 30.8% in 2011 to 27% by 2016. (2013: 31.8%) Decrease the percentage of high school students who are obese from 13% in 2009 to 12% by 2016. (2011: 14.7%)	Implementation of the State Obesity Prevention Plan, Indiana Cancer Control Plan, State Strategic Plan for Indiana's Adolescents, other Indiana-specific chronic disease strategic plans (as they become available), and other selected evidence-based interventions that are successful in practice. Maintain and enhance state and local infrastructure to implement priority nutrition, physical activity, obesity and other chronic disease policies and environmental changes across all settings and special populations. Educate on the need for adequate funding and resources for nutrition, physical activity, obesity and other chronic disease interventions. Maintain a surveillance system and evaluation activities to monitor and track progress.	State Obesity Prevention Plan Partners, ICC, Adolescent Health Coalition, other state coalition partners, health care professionals, health educators, nutritionists, and physical activity specialists

Increase Hoosiers at a Healthy Weight

TERTIARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**	By 2020, develop and disseminate a protocol for use by health care providers to integrate obesity prevention into office practice. (Currently do not have baseline data)	Provide training and technical assistance to State-funded primary care centers and FQHC staff to ensure the effective integration of obesity prevention into office practice.	State Obesity Prevention Plan partners, including but not limited to: local chapters of the AAP, AAFP, Nurses Associations, other professional associations representing health professionals, and individual health care providers
	Health Communications			
	Community Interventions			
	Other			

Listing of Acronyms

AAP: American Academy of Pediatrics

AAFP: American Academy of Family Physicians

BRFSS: Behavioral Risk Factor Surveillance System

CACFP: Child and Adult Care Food Program

CDC: Centers for Disease Control and Prevention

CSHAC: Coordinated School Health Advisory Council

ERC: ISDH Epidemiology Resource Center

FSSA: Indiana Family and Social Services Administration

IACCRR: Indiana Association for Child Care Resource and Referral

ICC: Indiana Cancer Consortium

ICIAH: Indiana Coalition to Improve Adolescent Health

Indiana AEYC: Indiana Association for the Education of Young Children

IDA: Indiana Dietetic Association

IDOA: Indiana Department of Administration

IDOE: Indiana Department of Education

IHA: Indiana Hospital Association

IHWI: Indiana Healthy Weight Initiative

INDOT: Indiana Department of Transportation

IPN: Indiana Perinatal Network

IRA: Indiana Restaurant Association

ISDH: Indiana State Department of Health

MPO: Metropolitan Planning Organization

SRTS: Safe Routes to School

YRBS: Youth Risk Behavior Survey

HEALTH PRIORITY: DECREASE TOBACCO USAGE

GOAL: Decrease tobacco use among all Hoosiers

Decrease Tobacco Usage

Indiana's Tobacco Burden

Tobacco use is the single most preventable cause of death and disease in the United States. Annually cigarette smoking causes nearly 480,000 deaths in the United States, more deaths than alcohol, AIDS, car accidents, illegal drugs, murders and suicides, combined.[i]

The impact of tobacco on Indiana is staggering. Each year over 9,800 Hoosier adults die from their own smoking and 290,000 Hoosiers are living with a tobacco-related illness or chronic disease.[ii] An estimated additional 1,400 adult nonsmokers die each year due to exposure to secondhand smoke, and nearly 160,000 youth in Indiana now under the age of 18 will prematurely die from a smoking related disease.[iii]

Average number of annual smoking-attributable deaths:

- Cancers – 3,978
- CVD – 3,127 (including 400 from stroke or cerebrovascular disease)
- Respiratory Diseases – 2,623

Total annual smoking-attributable mortality: 9,728[iv]

Annual deaths attributed to secondhand smoke: 1,426[v]

Hundreds more die from other tobacco-related causes, such as fires caused by smoking (more than 1,000 deaths annually nationwide[vi]), and smokeless tobacco use.

Economic Impact

- Annual health care costs related to smoking in Indiana: $2.93 billion[vii]
- Health care and premature loss of life costs related to secondhand smoke in Indiana: $1.3 billion[viii]
- For every pack of cigarettes sold in Indiana, Hoosiers spend $15.90 in lost productivity, health care costs, and premature death related to smoking.[ix]
- Medicaid expenditures directly related to tobacco: $590 million[x]
- Indiana residents' tax burden to treat tobacco-related diseases: $900/ household[xi]
- Smoking-caused productivity losses in Indiana: $2.6 billion[xii]

Decrease Tobacco Usage

- Annual smoking-related economic costs (including smoking-attributable medical expenditures and smoking-attributable neonatal medical expenditures) total $5,816 per smoker.[xiii]

Amounts do not include health costs caused by smoking-caused fires, smokeless tobacco use, or cigar and pipe smoking.

Tobacco Industry Influence in Indiana

Test Marketing of New Tobacco Products

Beginning in July 2007, RJ Reynolds introduced Camel Snus in Central Indiana as one of seven cities to receive the product. Philip Morris followed in March 2008 and released Marlboro Snus into the Indianapolis market. Tourney Snus (Vector Group Ltd of Liggett) and Grand Prix (Vector Group Ltd of Liggett) were also test marketed in Central Indiana. While Central Indiana has been the focus of these test markets, ongoing surveillance of the marketing and sales of the products indicate these products are moving further out into the state.

The introduction of snus products is of particular concern for Indiana employers who have spent considerable resources to motivate smokers to quit. Snus products are marketed as an alternative for smokers when they cannot smoke, thus leading to dual tobacco use. Therefore the effort of employers to reduce the percentage of tobacco-using workers is undermined.

In 2009, R.J. Reynolds introduced dissolvable tobacco products in the central Indiana area. These products called “dissolvables” are spitless, smokeless tobacco that can be dissolved in the mouth. They resemble breath mints, breath strips and toothpicks. The products were only tested in three U.S. cities. The potential harm from these products is of much concern and has caused the Indiana Poison Center to issue a warning to parents and health care providers about the potential health impacts of a child ingesting this product.

Electronic nicotine delivery devices (ENDS) are devices that claim to contain no tobacco or stem material, but many are designed to look like conventional cigarettes. They are intended to be inhaled, often referred to as “vaping”, similar to how a smoker uses conventional cigarettes. They produce an aerosol with each inhalation by the user that resembles and tastes like the smoke produced by conventional tobacco products. At this time there is no publicly available independent research on their safety or

Decrease Tobacco Usage

efficacy as smoking cessation aids. E-cigarettes are currently not regulated by the U.S. Food and Drug Administration (FDA) and are currently under investigation. The FDA has warned the public that e-cigarettes contain various toxic, mutagenic, carcinogenic (cancer causing) chemicals. The electronic cigarette market is now being ventured by big tobacco. MarkTen, an e-cigarette developed by Philip Morris, was test marketed exclusively in Indiana from August 2013 to April 2014. Vuse, an e-cigarette developed by RJ Reynolds, was introduced to the national market, including Indiana, in June 2014.

Spending on Tobacco Prevention in Indiana vs. Tobacco Company Marketing Expenditures

The U.S. Centers for Disease Control and Prevention (CDC) recommends that Indiana spend $73.5 million a year to have an effective, comprehensive tobacco prevention program. In SFY 2014, Indiana allocated $5 million a year for tobacco prevention and cessation. This is 6.8% of the CDC's recommendation and ranks Indiana 31st among the states in the funding of tobacco prevention programs.[xiv]

Tobacco companies spend approximately $271 million annually for marketing in Indiana. That is over 50 times what Indiana spends on tobacco prevention each year. Annual tobacco industry marketing expenditures nationwide total approximately $8.5 billion.[xv]

Indiana Adult & Youth Smoking Rates

Indiana has experienced a significant decline in adult smoking prevalence from 2000 to 2010. This decline is illustrated by 2000-2010 BRFSS data. Indiana's adult smoking rate in 2010 was 23.1%, which is a statistically significant decrease from the 2001 adult smoking rate of 27.4%.

Beginning in 2011, there were changes made to the Behavioral Risk Factor Surveillance System (BRFSS). The health behavior survey, conducted in all 50 states, is using an updated data collection and analysis technique. This new method accounts for cell phone only households as a part of the data collection. These new data more accurately reflect adult smoking behaviors in Indiana than estimates published in recent years.

The 2013 adult smoking rate in Indiana was 21.9%, a significant decline from 2011 (25.6%). Indiana still ranks high among states in adult smoking prevalence, and is higher than the U.S. rate of 19.6%. Indiana smoking

rates for men remain higher than those for Indiana women. Hoosier smoking rates by gender are also higher than the national rates.[xvi]

Current smoking among high school students in Indiana is at 13.7%, a dramatic drop from 31.6% in 2000. This decrease in the smoking rate among high school students equates to over 180,000 fewer youth smokers. Four percent of middle school students in Indiana are current smokers. This is a 59% decline from 2000, when approximately one in every ten middle school students smoked cigarettes.[xvii]

Health Disparities

Tobacco use is Indiana's leading cause of preventable death. Each year 9,800 lives are cut short in Indiana because of tobacco use. In 2011 there were nearly 3,900 lung cancer deaths in Indiana. Each year between 1,020 and 1,820 Hoosiers die from exposure to others' smoking, such as exposure to secondhand smoke or smoking during pregnancy. The rate of smoking during pregnancy in Indiana is 16%, nearly double the national average.[xviii] Similar to other states, mental health consumers in Indiana use tobacco at a disproportionately higher rate that the general population. In Indiana, the proportion of adults with a mental illness who smoke cigarettes is 39%.[xix] While tobacco use and secondhand smoke exposure are of grave concern for all Indiana residents, significant health disparities persist among racial and ethnic groups. While Caucasian adults in Indiana smoke at a rate of 22%, current smoking prevalence among African American adults is 25%. Health disparities persist among income gaps, with lower income associated with a higher prevalence of tobacco use and tobacco-related diseases. In 2013, current smoking among those with an annual household income of less than $15,000 was 38% compared to 10% smoking prevalence among those with annual income of $75,000 or higher.[xx] Approximately 12% ($487 million) of all Indiana Medicaid expenditures are related to smoking.

Changing Landscape & New Tobacco Control Opportunities

Indiana's Tobacco Policies

The current Indiana state cigarette excise tax is 99.5 cents/pack. Nationally, the average state tobacco tax is $1.54, with taxes ranging from 17 cents to $4.35/pack.

Indiana's first statewide smoke-free air law, House Enrolled Act 1149 (HEA 1149), went into effect on July 1, 2012. The law prohibits smoking in

most indoor public places and workplaces, as well as within eight feet of each public entrance to venues covered by the state law. Examples of places where smoking is prohibited include restaurants, bowling alleys, movie theaters, hotels and motels, and office buildings. Venues that are exempt from HEA 1149 include freestanding bars and taverns, private and fraternal clubs, facilities with a gambling game license, satellite-gaming facilities, cigar bars, hookah bars, retail-tobacco stores, cigar-manufacturing facilities, cigar-specialty stores, and businesses in private residences, provided they meet certain requirements of HEA 1149.

Now that the statewide smoke-free air law is in effect, 100% of all Hoosiers are protected from secondhand smoke by a local smoke-free air law that covers workplaces and restaurants. However, only 27.6% of Indiana residents are protected by a local law that covers workplaces, restaurants, and bars.[xxi] At a national level, 82% are covered by a smoke-free air law that covers most public places and workplaces, including restaurants. Nearly half, or 49%, of the nation is covered by a comprehensive smoke-free air law which covers all workplaces, restaurants, and bars.[xxii]

Regulation of Tobacco Products

On June 22, 2009, President Barack Obama signed the Family Smoking Prevention and Tobacco Control Act. This historic legislation grants authority to regulate tobacco products to the U.S. Food and Drug Administration. Powerful opportunities to advance the regulation of tobacco products exist at state and local levels, opportunities which Indiana's tobacco control commission must take advantage of to stay in front of the increasingly aggressive tactics of the tobacco industry.

Affordable Care Act

The Affordable Care Act (ACA) has placed more focus on prevention in healthcare, including tobacco cessation. As major changes are being made to the healthcare delivery and payment systems in this country, there is a great opportunity to incorporate tobacco cessation treatment as a key to preventing disease and death and avoiding rising healthcare costs.

Surgeon General's Report

January 11, 2014 marked the 50th anniversary of the first Surgeon General's report on smoking and health. Fifty years after the release of the first Surgeon General's report on smoking and health, remarkable

Decrease Tobacco Usage

progress has been made. Since 1964, smoking prevalence among U.S. adults has been reduced by half. The 1964 report forever changed Americans' understanding of the deadly consequences of smoking and was a historic turning point in the nation's fight against tobacco use. Unfortunately, tobacco use remains the leading preventable cause of disease, disability, and death in the United States.

The 32nd tobacco-related Surgeon General's report was also issued in January, 2014, entitled *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General.* The report highlights 50 years of progress in tobacco control and prevention, presents new data on the health consequences of smoking, and discusses opportunities that can potentially end the smoking epidemic in the United States. Scientific evidence contained in this report supports the following facts:

- The century-long epidemic of cigarette smoking has caused an enormous, avoidable public health catastrophe in the United States.
- Despite significant progress since the first Surgeon General's report, issued 50 years ago, smoking remains the single largest cause of preventable disease and death in the United States.
- The scientific evidence is incontrovertible: inhaling tobacco smoke, particularly from cigarettes, is deadly. Since the first Surgeon General's Report in 1964, evidence has linked smoking to diseases of nearly all organs of the body.
- Smokers today have a greater risk of developing lung cancer than did smokers in 1964.
- For the first time, women are as likely to die as men from many diseases caused by smoking.
- Proven tobacco control strategies and programs, in combination with enhanced strategies to rapidly eliminate the use of cigarettes and other combustible, or burned, tobacco products, will help us achieve a society free of tobacco-related death and disease.

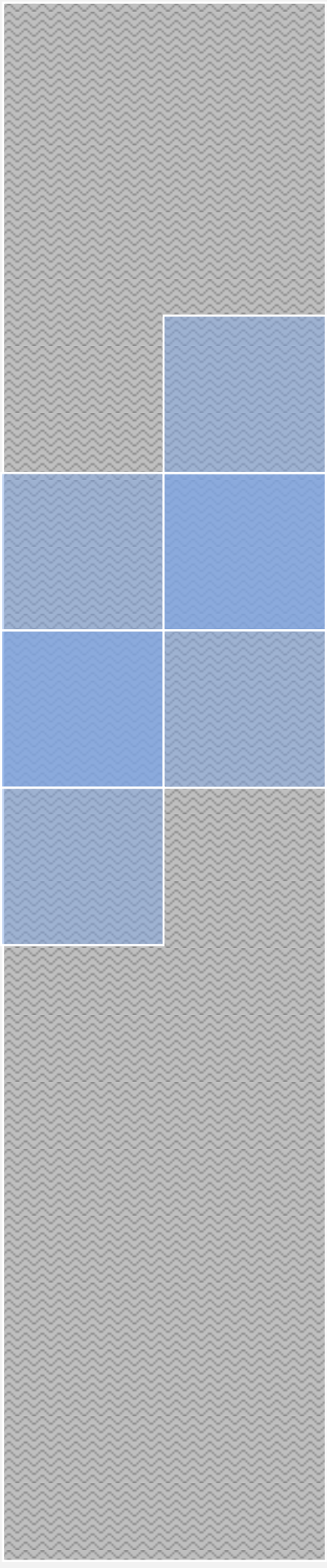
CVS/Caremark

In February, 2014 CVS Caremark announced that it will stop selling tobacco products at its more than 7,600 stores throughout the United States

beginning in October, 2014, thus setting a powerful example for all retailers, especially those related to healthcare. This announcement's timing was appropriate as the nation marked the 50th anniversary of the first Surgeon General's report on smoking and health, and just weeks after the 32nd Surgeon General's report found that smoking is even more hazardous and takes an even greater toll on the nation's health.

Conclusion

Tobacco use, if left unchecked, will almost certainly cause immeasurable harm to the physical health of children and adults, while damaging our country's fiscal health. To prevent these unnecessary health effects, as well as loss of productivity and premature death, it is imperative that the federal, state, and local governments continue to work to prevent tobacco use among young people. Tobacco control programs are at the heart of public health recommendations for national health reform, as the number one recommendation is to invest in population-based and community-based prevention, education and outreach programs that have been proven to prevent disease and injury and improve the social determinants of health. Tobacco control has years of evidence-based research behind it.



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[i] U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

[ii] U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

[iii] CDC, *State Data Highlights 2006*. See also, CDC―Projected Smoking-Related Deaths Among Youth—United States, *MMWR* 45(44):971-974, November 11, 1996.

[iv] CDC Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC): Adult SAMMEC and Maternal and Child Health (MCH) SAMMEC software: http://www.cdc.gov/tobacco/sammec

[v] Zollinger, T., Saywell, R., Lewis, C. Estimating the Economic Impact of Secondhand Smoke on Indiana in 2010. Bowen Research Center – Indiana University School of Medicine, January 2012.

[vi] Karter, Michael Jr."Fire Loss in the United States 2007." National Fire Protection Association. National Fire Protection Association. http://www.nfpa.org/assets/files/pdf/os.fireloss.pdf August 2010.

[vii] CDC, *Data Highlights 2006* [and underlying CDC data/estimates]. CDC's STATE System average annual smoking attributable productivity losses from 1997-2001(1999 estimates updated to 2004 dollars); CDC, ―Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States 2000-2004,‖ *MMWR* 57(45):1226-1228, November 14, 2008, http://www.cdc.gov/mmwr/PDF/wk/mm5745.pdf.

[viii] Zollinger, T., Saywell, R., Lewis, C. Estimating the Economic Impact of Secondhand Smoke on Indiana in 2010. Bowen Research Center – Indiana University School of Medicine, January 2012.

[ix] Rumberger J., Hollenbeak C., Kline D. (2010). Potential costs and benefits of Smoking Cessation for Indiana. Retrieved from: http://www.lung.org/stop-smoking/tobacco-control-advocacy/reports-resources/cessation-economic-benefits/reports/IN.pdf

[x] Miller, L. et al., "State Estimates of Medicaid Expenditures Attributable to Cigarette Smoking, Fiscal Year 1993," *Public Health Reports* 113: 140-151, March/April 1998; Orleans, CT, et al., "Helping Pregnant Smokers Quit: Meeting the Challenge in the Next Decade", *Tobacco Control* 9(Supplemental III): 6-11, 2000.

[xi] Orzechowski & Walker, *Tax Burden on Tobacco* 2009, state agencies. U.S. General Accounting Office (GAO).

[xii] CDC, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses—United States 2000-2004," *MMWR* 57(45): 1226-1228, November 14, 2008, http://www.cdc.gov/mmwr/PDF/wk/mm5745.pdf

[xiii] Berman, Micah, et al. "Estimating the cost of a smoking employee." *Tobacco Control* (2013).

[xiv] CDC, *Best Practices for Comprehensive Tobacco Control*, January 2014

[xv] U.S. Federal Trade Commission (FTC), *Cigarette Report for 2009 and 2010*

[xvi] 2001-2013 Behavioral Risk Factor Surveillance System

[xvii] 2000-2012 Indiana Youth Tobacco Survey

[xviii] 2013 Indiana birth certificates, Indiana State Department of Health – Epidemiology Resource Center

[xix] CDC. Vital signs: current cigarette smoking among adults aged ≥18 years with mental illness – United States, 2009-2011. MMWR 2013; 62.

[xx] 2013 Indiana Behavioral Risk Factor Surveillance System

[xxi] TPC Policy Tracking

[xxii] Americans for Nonsmokers' Rights overview list: http://www.no-smoke.org/pdf/mediaordlist.pdf

Decrease Tobacco Usage

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Increase the percentage of Indiana's population that is protected from secondhand smoke by law from 8.7% in 2010 to 100% by 2015. (2014 update: 27.6%)	Implement smoke free air policy at all levels from schools and hospital campuses to state and community laws. Educate on the public health benefits of high tobacco prices (cigarette taxes and taxes on other tobacco products).	Indiana tobacco control plan partners, national, and state partners including but not limited to: Tobacco Free Indiana (a coalition that includes representation from the American Lung Association, the American Cancer Society, the American Heart Association, the Indiana Academy of Family Physicians, Tobacco Free Kids, Americans for Nonsmokers' Rights, and others) Hoosier Faith and Health Coalition Indiana Cancer Consortium
		Increase Indiana's cigarette tax from 99.5 cents in 2010 to $2.00 by 2015. (2014 update: 99.5 cents)		
		Increase tax on other tobacco products from 24% of the wholesale price in 2010 to 45% of the wholesale price by 2015. (2014 update: OTP taxed at 24% of wholesale price; e-cigarettes only subject to sales tax)		
	Health Communications	Increase confirmed awareness of counter-marketing campaigns from 53% in 2010 to 67% by 2015. (2014 update: 35% confirmed awareness, 2013 IN Adult Tobacco Survey – TPC's reduced media budget and capacity to conduct mass media counter marketing campaigns has impacted confirmed awareness)	Conduct mass media counter-marketing campaigns under the brands Quit Now Indiana and Voice (ages 12-17); campaigns include paid and earned and social media	Indiana State Department of Health, Tobacco Prevention and Cessation Local Tobacco Control Coalitions CDC National Media Campaign FDA National Media Campaign
		Increase the proportion of adults that think secondhand smoke is a serious health hazard from 57% in 2008 to 75% by 2015. (2014 update: 64%, 2013 IN Adult Tobacco Survey)		
		Increase to 85% the percentage of adults who think smokeless tobacco products are <u>as harmful</u> as cigarettes by 2015. (71% in 2008, IN Adult Tobacco Survey)		

Decrease Tobacco Usage

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Community Interventions**	Decrease high school youth smoking rates from 18% in 2008 to 17% by 2015. (2014 update: 14%, 2012 IN Youth Tobacco Survey) Decrease adult smoking rate from 23% in 2009 to 18% by 2015. (2014 update: 21.8%, 2013 BRFSS) Decrease smoking during pregnancy rate from 18.5% in 2007 to 12% by 2015. (2014 update: 15.7%, 2013 IN Natality Report) (Also see MCH plan)	Provide funding, technical assistance and training to community based coalitions, one per county, with a specific tobacco control work plan. Provide funding, technical assistance and training local minority-based coalitions, reaching 95% of the minority population in the state, with a specific tobacco control work plan. Support youth mobilization to increase anti-tobacco attitudes through the Voice youth movement and hub support structure.	Indiana State Department of Health, Tobacco Prevention and Cessation Promoting Smoke-free Pregnancies Throughout Indiana (PSPI) Office of Medicaid Policy and Planning Managed Care Organizations Local Tobacco Control Coalitions and partners to support Voice
	Other	Decrease cigarette consumption from 453 million packs in SFY 2010 to no more than 425 million packs per year by 2015. (2014 update: 418 million in SFY 2014) Increase to 100% the counties with a funded local tobacco control coalition by 2015. (70% of the counties in 2009-2011, ITPC Community Program; 2014 update: 46% of counties in 2013-2015)	Maintain and enhance state and local infrastructure to implement robust tobacco control interventions, including training and technical assistance. Educate on the need for adequate state funding for tobacco control interventions. Monitor the tobacco industry marketing tactics. Support surveillance and evaluation tools to monitor tobacco use indicators. Education for state and local policymakers to understand the more cost-effective population based interventions.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana tobacco control plan partners, national and state partners including but not limited to: Tobacco Free Indiana Indiana Cancer Consortium

Decrease Tobacco Usage

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**	Increase the proportion of smokers that report a physician advised them to quit using tobacco from 70.5% in 2008 to 90% in 2015. (2014 update; 50%, 2013 IN Adult Tobacco Survey)	Implement cessation systems changes at all public health and health care setting to ask, advise and refer. Increase and promote health care benefits/health insurance coverage for evidence-based tobacco treatments that are provided by employers. Increase and promote health care coverage for evidence-based tobacco treatments provided by the state Medicaid program.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Indiana tobacco control plan partners Local Tobacco Control Coalitions Health Plans
	Health Communications	Increase the proportion of smokers that are aware of the Indiana Tobacco Quitline (ITQL) from 49% in 2008 to 67% by 2015. (2014 update: 28%, 2013 IN Adult Tobacco Survey)	Promote a message of quitting and support available through the Indiana Tobacco Quitline (ITQL) and avoidance of secondhand smoke.	Indiana State Department of Health, Tobacco Prevention and Cessation CDC National Media Campaign Quit Now Indiana Preferred Networks Local Tobacco Control Coalitions
	Community Interventions	Increase the proportion of smokers making a quit attempt from 50% in 2008 to 65% by 2015. (2014 update: 52%, 2013 IN Adult Tobacco Survey) Increase annual calls to the ITQL by 2015, from the baseline of 19,000 in SFY 2010. (2014 update: 10,800 calls in SFY 2014, ITQL service reports - TPC) Increase the utilization of tobacco treatment among Medicaid members by 2015. (unknown; OMPP)	Provide quit coaching through the Indiana Tobacco Quitline (ITQL). Implement cessation systems changes at all levels of health care delivery to ask, advise, and refer.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Local Tobacco Control Coalitions Indiana tobacco control plan partners, including the Office of Medicaid Policy and Planning and the Managed Care Organizations
	Other			

Decrease Tobacco Usage

SECONDARY PREVENTION				
		Outcomes	Activities	Responsible Partner(s)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			
Access to Care	**Systems Change**	Increase the proportion of smokers that report a physician advised them to quit using tobacco from 70.5% in 2008 to 90% in 2015. (2014 update; 50%, 2013 IN Adult Tobacco Survey)	Implement cessation systems changes at all public health and health care setting to ask, advise and refer. Increase and promote health care benefits/health insurance coverage for evidence based tobacco treatments that are provided by employers. Increase and promote health care coverage for evidence based tobacco treatments provided by the state Medicaid program.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Indiana tobacco control plan partners, including the Office of Medicaid Policy and Planning and Managed Care Organizations
	Health Communications	Increase the proportion of smokers that are aware of the Indiana Tobacco Quitline (ITQL) from 49% in 2008 to 67% by 2015. (2014 update: 28%, 2013 IN Adult Tobacco Survey)		Indiana State Department of Health, Tobacco Prevention and Cessation Quit Now Indiana Preferred Networks CDC National Media Campaign Local Tobacco Control Coalitions

Decrease Tobacco Usage

SECONDARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partner(s)**
Access to Care	**Community Interventions**	Increase the proportion of smokers making a quit attempt from 50% in 2008 to 65% by 2015. (2014 update: 52%, 2013 IN Adult Tobacco Survey)	Provide quit coaching through the Indiana Tobacco Quitline (ITQL). Implement cessation systems changes at all levels of health care delivery to ask, advise, and refer.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Local Tobacco Control Coalitions Indiana tobacco control plan partners, including the Office of Medicaid Policy and Planning and the Managed Care Organizations
		Increase annual calls to the ITQL by 2015, from the baseline of 19,000 in SFY 2010. (2014 update: 10,800 calls in SFY 2014, ITQL service reports - TPC)		
		Increase the utilization of tobacco treatment among Medicaid members by 2015. (unknown, OMPP)		
	Other			

Decrease Tobacco Usage

TERTIARY PREVENTION				
		Outcomes	Activities	Responsible Partners(s)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			
Access to Care	**Systems Change**	Increase the proportion of smokers that report a physician advised them to quit using tobacco from 70.5% in 2008 to 90% in 2015. (2014 update; 50%, 2013 IN Adult Tobacco Survey)	Implement cessation systems changes at all public health and health care setting to ask, advise and refer. Increase and promote health care benefits/health insurance coverage for evidence-based tobacco treatments that are provided by employers. Increase and promote health care coverage for evidence-based tobacco treatments provided by the state Medicaid program.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Local Tobacco Control Coalitions Indiana tobacco control plan partners, including the Office of Medicaid Policy and Planning and the Managed Care Organizations
	Health Communications	Increase the proportion of smokers that are aware of the Indiana Tobacco Quitline (ITQL) from 49% in 2008 to 67% by 2015. (2014 update: 28%, 2013 IN Adult Tobacco Survey)		Indiana State Department of Health, Tobacco Prevention and Cessation Quit Now Indiana Preferred Networks CDC National Media Campaign Local Tobacco Control Coalitions

Decrease Tobacco Usage

TERTIARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partner(s)**
Access to Care	**Community Interventions**	Increase the proportion of smokers making a quit attempt from 50% in 2008 to 65% by 2015. (2014 update: 52%, 2013 IN Adult Tobacco Survey) Increase annual calls to the ITQL by 2015, from the baseline of 19,000 in SFY 2010. (2014 update: 10,800 calls in SFY 2014, ITQL service reports - TPC) Increase the utilization of tobacco treatment among Medicaid members by 2015. (unknown, OMPP)	Provide quit coaching through the Indiana Tobacco Quitline (ITQL). Implement cessation systems changes at all levels of health care delivery to ask, advise, and refer.	Indiana State Department of Health, Tobacco Prevention and Cessation Indiana Tobacco Quitline Quit Now Indiana Preferred Networks Local Tobacco Control Coalitions Indiana tobacco control plan partners, including the Office of Medicaid Policy and Planning and the Managed Care Organizations
	Other			

All Tobacco outcomes are adapted from the 2015 Indiana Tobacco Control Strategic Plan (2009)

HEALTH PRIORITY: REDUCE INFANT MORTALITY

GOAL: Reduce the infant mortality rate from 6.9 per 1,000 live births in 2008 to 6.0 per 1,000 live births in 2020.

Reduce Infant Mortality

The infant mortality rate is an estimate of the number of infant deaths for every 1,000 live births. Infant mortality is the number one indicator of health status in the world, because factors affecting the health of entire populations can also impact the mortality rate of infants. The leading causes of infant death are:

1. Congenital malformations
2. Prematurity/Low Birthweight
3. Sudden Infant Death Syndrome (SIDS)
4. Maternal complications
5. Injury

These top five causes accounted for 57% of all infant deaths in the United States in 2010. Within the leading risk factors, in 2012 Indiana had:

1. Better preterm and low birthweight percentages than the national average
2. Worse SIDS rate than the national average in 2011, but Indiana's rate did decrease from 2011 (60.9) to 2012 (56.5)
3. Worse suffocation rate than the national average in 2011, but Indiana's rate did decrease from 2011 (22.7) to 2012 (13.2). Some of this decrease is likely due to misclassification of ICD-10 codes for Sudden Unexplained Infant Deaths (SUIDS).
4. Concerning racial disparities for all indicators

Indiana's infant mortality rate in 2012 was 6.7 per 1,000 live births, down from 7.7 in 2011 Out of the 83,250 live births, 556 infants died before their first birthday. These numbers consistently place Indiana in the bottom 10 worst states in the nation in regards to infant mortality. In 2010, Indiana was 45th out of 51 states, or 7th worst when it comes to comparing infant mortality rates. The top causes of infant mortality in Indiana in 2012 included:

1. Perinatal risks (conditions originating in the perinatal period such as low birthweight, preterm, premature, rupture of membranes, and bacterial sepsis of newborn) – 46.4% (258 deaths)
2. Congenital malformations – 23.6% (131 deaths)
3. SUIDs – 14.0% (79 deaths)
4. Other – 14.6% (81 deaths)
5. Assaults/Other accidents (homicide, accidental inhalation/ingestion of food or other objects, falls) – 1.4% (7 deaths)

Reduce Infant Mortality

Health Disparities

There are also significant racial disparities with infant mortality, since the African American rate of 14.5 was almost twice the white rate of 5.5 in 2012. Overall, black infants are 2.7 times more likely to die than white infants in Indiana. The percentage of Black women receiving prenatal care in the first trimester was 57.4% in 2012. The Black premature birth rate in Indiana in 2012 was 13.3%, which is much higher than the white premature birth rate of 9.1%. Similarly, the Black low birthweight percentage in 2012 was 12.5%, almost twice the white rate of 7.3%. Lastly, 38.9% of black mothers did not breastfeed in 2012 compared to 22.8% of white mothers. Overall, black women in Indiana are more likely to have a low birthweight or preterm baby, not receive early prenatal care, and less likely to breastfeed at hospital discharge.

In comparison, white women in Indiana are more likely to smoke during pregnancy. Smoking during pregnancy is an indicator for infant death, prematurity, and low birthweight. Indiana's smoking rate during pregnancy is always one of the 10 highest in the nation. In 2012, 16.5% of women smoked during pregnancy compared to the United States rate of 8.7% and the national goal of 1.4%. The Medicaid population that smokes during pregnancy is consistently around 30% (27% for 2012). What was even more alarming was that for pregnant women on Medicaid, 72 of Indiana's 92 counties had smoking rates during pregnancy of 30% or greater and 27 counties had smoking rates during pregnancy of 40% or greater.

MCH has been collaborating with the Office Medicaid Policy and Planning (OMPP), Medicaid Managed Care Organizations, the Tobacco Prevention and Cessation Commission at the Indian State Department of Health, Indiana Tobacco Quitline, Indiana Department of Mental Health and Addictions, and other state and local partners to decrease smoking among pregnant women on Medicaid and all pregnant women.

Over the last two decades, there has been a marked shift in the gestational age distribution of Indiana live births towards earlier ages between 1990 and 2012. In 2012, late preterm (34-36 weeks) and near term (37-38 weeks) births were 7.0% and 25.7%, respectively. In contrast, births at 39 weeks were 36.1% and births at 40+ weeks were 28.6%. The percent of preterm births has been decreasing the past few years; however, our percent of early term (37-38 weeks) births has remained high.

Reduce Infant Mortality

Cesarean delivery accounted for approximately 30% of all births in 2012, up by 52% since the lowest rate of 19.8% in 1997. The upward trend in cesarean rates between 1997 and 2012 was evident across all gestational ages with the largest increases for late preterm and near term births. The primary Cesarean section rate remains constant around 20%.

Rate of induction of labor almost tripled in Indiana from 9.3% in 1990 to 30.9% in 2012, surpassing the national rates after mid 1990‘s. The upward trend in induction rates was sharper for term and late preterm births compared to very and moderately preterm and post-term.

Economic Impact

There are no current estimates of the total cost or economic impact of infant mortality at the state or national level. However, the bulk of state costs for infant mortality can be attributed to the cost of treating preterm and low birthweight babies. Premature birth is birth that happens too soon, before 37 weeks. Babies born this early may have more health problems or may need to stay in the hospital longer than babies born later. Each year in the United States, nearly half a million babies—about 1 in 9—are born prematurely.

Prematurity can cause long-term health problems for babies throughout their lives. This can have long-lasting financial effects and can affect a person’s education and ability to work.

In 2007, the Institute of Medicine reported that the cost associated with premature birth in the United States was $26.2 billion each year. Here’s how the numbers add up:

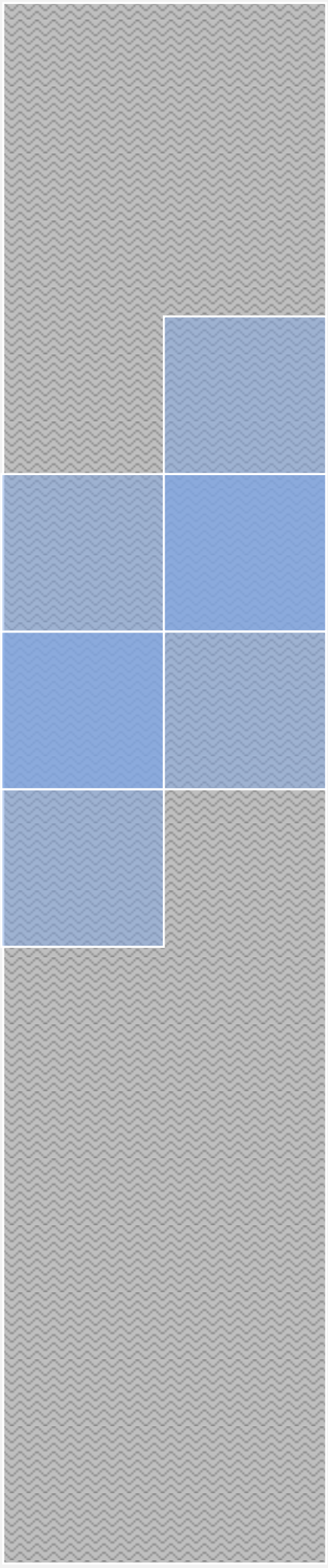
- $16.9 billion in medical and health care costs for the baby
- $1.9 billion in labor and delivery costs for mom
- $611 million for early intervention services. These are programs for children from birth to age three with disabilities and developmental delays. They help children learn physical, thinking, communicating, social, and self-help skills that normally develop before age three.
- $1.1 billion for special education services. These services are specially designed for children with disabilities from ages three through 21. They help children with development and learning. Children can receive these services at school, at home, in hospitals, and in other places, as needed.

Reduce Infant Mortality

- $5.7 billion in lost work and pay for people born prematurely (March of Dimes, 2013).

New Areas of Emphasis

In fall 2010, ISDH Maternal and Child Health Division called together a group of health care providers, hospitals, health professional organizations and concerned organizations to coordinate statewide systems and approaches to improve perinatal health outcomes. From this Levels of Care Task Force, the Indiana Perinatal Quality Improvement Collaborative (IPQIC) was formed. Actions items from IPQIC include: instituting hard-stop policies in all Indiana delivering hospitals; stopping Medicaid reimbursement for early elective deliveries; and piloting the Indiana Hospital Levels of Care Standards with hospital obstetric and neonatal units while moving towards certification in 2016. Future works to be completed include: Implementation of 17-hydroxyprogesterone for mothers who have experienced a previous preterm birth; linking Medicaid data with ISDH vital statistics and newborn screening data; expanding evidence-based smoking cessation programs for pregnant women; and instituting Perinatal Centers for regionalization across the state.



Reduce Infant Mortality

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Reduce the percentage of infants born prematurely from 10.6% in 2008 to 9.2% by 2016. (2012: 9.6%)	Implementation of the Indiana Perinatal Hospital Standards and creation of Perinatal Centers of Care	Indiana State Department of Health (Maternal and Child Health), Indiana Perinatal Network, Indiana Chapter March of Dimes, Indiana Chapter American College of Obstetricians and Gynecologists, Indiana Chapter American Academy of Pediatrics, Office of Medicaid Policy and Planning, Indiana Chapter Association of Women's Health, Obstetric and Neonatal Nurses, Anthem Insurance, Indiana Chapter American Academy of Family Physicians, Indiana Hospital Association, Indiana Minority Health Coalition, Indiana Primary Health Care Association, Indiana Rural Health Association, Indiana State Medical Association, Indiana University Fairbanks School of Public Health, Managed Health Services, and Nurse Family Partnership
		Reduce the percentage of infants born at a low birth weight from 8.3% in 2008 to 7.8% by 2016. (2012: 7.9%)		
		Maintain the percentage of infants born at a very low birth weight at 1.4%. (2008: 1.4%; 2012: 1.3%)		
		Reduce the percentage of births between 34-38 weeks gestation delivered by cesarean section from 35.3% in 2008 to 28.0% by 2016. (2012: 34.9%)	Implementation of the Medicaid 39-week hard stop policy: Starting July 1, 2014, Medicaid will no longer pay for early elective deliveries prior to 39 weeks	
		Reduce the percentage of births between 34-38 weeks gestation with induced labor from 26.3% in 2008 to 20.0% by 2016. (2012: 22.9%)		

Reduce Infant Mortality

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Health Communications**	Reduce the percentage of infants born prematurely from 10.6% in 2008 to 9.2% by 2016. (2012: 9.6%)	Educating physicians and hospital staff about the importance of reducing early elective deliveries before 39 weeks gestation and implementing hard stop policies Creating and disseminating educational materials for patients and providers on: 1) Early elective deliveries 2) Smoking cessation during pregnancy	Indiana State Department of Health (Maternal and Child Health), Indiana Perinatal Network, Indiana Chapter March of Dimes, Indiana Chapter American College of Obstetricians and Gynecologists, Indiana Chapter American Academy of Pediatrics, Office of Medicaid Policy and Planning, Indiana Chapter Association of Women's Health, Obstetric, Neonatal Nurses, Anthem Insurance, Indiana Chapter American Academy of Family Physicians, Indiana Hospital Association, Indiana Minority Health Coalition, Indiana Primary Health Care Association, Indiana Rural Health Association, Indiana State Medical Association, Indiana University Fairbanks School of Public Health, Managed Health Services, and Nurse Family Partnership
		Reduce the percentage of infants born at a low birth weight from 8.3% in 2008 to 7.8% by 2016. (2012: 7.9%)		
		Maintain the percentage of infants born at a very low birth weight at 1.4%. (2008: 1.4%; 2012: 1.3%)		
		Reduce the percentage of births between 34-38 weeks gestation delivered by cesarean section from 35.3% in 2008 to 28.0% by 2016. (2012: 34.9%)		
		Reduce the percentage of births between 34-38 weeks gestation with induced labor from 26.3% in 2008 to 20.0% by 2016. (2012: 22.9%)		
		Reduce the rate of all infant deaths from 6.9 per 1,000 live births in 2008 to 6.0 per 1,000 live births by 2020. (2012: 6.7 per 1,000 live births)	Statewide public relations campaign	Indiana State Department of Health (Maternal and Child Health), Hirons and Company
		Reduce the rate of infant deaths from suffocation from 33.80 per 100,000 live births in 2008 to 20.43 per 100,000 live births by 2016. (2012: 13.20 per 100,000 live births)*	Safe sleep coordinator will be providing statewide education and outreach	Indiana State Department of Health (Maternal and Child Health)

*Although this rate is below the goal and some true decrease is occurring, the rate is likely to fluctuate due to the instability of low numbers and the vulnerability of miscoding.

Reduce Infant Mortality

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Community Interventions**	Reduce the rate of infant deaths from suffocation from 33.80 per 100,000 live births in 2008 to 20.43 per 100,000 live births by 2016. (2012: 13.20 per 100,000 live births)*	Distribute free cribs through Cribs for Kids program to families across the state	Indiana State Department of Health (Maternal and Child Health), Indiana Department of Child Services
	Other			
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			

*Although this rate is below the goal and some true decrease is occurring, the rate is likely to fluctuate due to the instability of low numbers and the vulnerability of miscoding.

Reduce Infant Mortality

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Increase the proportion of women who breastfeed at discharge from 68.5% in 2008 to 81.9% by 2016. (2012: 75.6%)	Create and implement a statewide breastfeeding strategic plan	Indiana State Department of Health (Maternal and Child Health), National Institute for Children's Health Quality (NICHQ)
	Health Communications			
	Community Interventions	Reduce the rate of infant deaths from suffocation from 33.80 per 100,000 live births in 2008 to 20.43 per 100,000 live births by 2016. (2012: 13.20 per 100,000 live births)*	Safe sleep education and training for first responders per Indiana Code	Indiana State Department of Health (Maternal and Child Health)
		Reduce the percentage of infants born prematurely from 10.6% in 2008 to 9.2% by 2016. (2012: 9.6%)	Quality improvement project implementing 17-hydroxyprogesterone to mothers who have experienced a previous preterm birth	Indiana State Department of Health (Maternal and Child Health), Indiana Perinatal Network, Indiana Chapter March of Dimes, Indiana Chapter American College of Obstetricians and Gynecologists, Indiana Chapter American Academy of Pediatrics, Office of Medicaid Policy and Planning, Indiana Chapter Association of Women's Health, Obstetric, Neonatal Nurses, Anthem Insurance, Indiana Chapter American Academy of Family Physicians, Indiana Hospital Association, Indiana Minority Health Coalition, Indiana Primary Health Care Association, Indiana Rural Health Association, Indiana State Medical Association, Indiana University Fairbanks School of Public Health, Managed Health Services, and Nurse Family Partnership
	Other			

*Although this rate is below the goal and some true decrease is occurring, the rate is likely to fluctuate due to the instability of low numbers and the vulnerability of miscoding.

Reduce Infant Mortality

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions	Maintain that at least 99.9% of eligible children born in IN receive a heel-stick screening. (2008: 100%; 2012: 99.9%)	Collaborate with delivering hospitals to ensure compliance with newborn screening rules per Indiana Code	Indiana State Department of Health (Maternal and Child Health)
		Maintain that at least 99.9% of eligible children born in IN receive a hearing screening. (2008: 95.4%; 2012: 99.9%)		
	Other			

Reduce Infant Mortality

TERTIARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions	Reduce the percentage of women who smoked during their pregnancy from 18.5% in 2008 to 14.1% by 2016. (2012: 16.5%)	Implementing evidence-based Baby and Me-Tobacco Free program in 8 counties in Indiana with possible expansion to other areas of the state Implementing prenatal care coordination through Title V block grant funding	Indiana State Department of Health (Maternal and Child Health), Tobacco Prevention and Cessation (TPC), Division of Mental Health and Addiction (DMHA), Anthem Insurance, CVS, Indiana University School of Public Health
		Reduce the percentage of infants born prematurely from 10.6% in 2008 to 9.2% by 2016. (2012: 9.6%)		
		Reduce the percentage of infants born at a low birth weight from 8.3% in 2008 to 7.8% by 2016. (2012: 7.9%)		
		Maintain the percentage of infants born at a very low birth weight at 1.4%. (2008: 1.4%; 2012: 1.3%)		
	Other			
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions	Increase the ratio of referrals to health and health related services to 5.0 per call by 2016. (2012: 3.6)	Provide quality customer service to all individuals calling into the Indiana Family Help Line	Indiana State Department of Health (Maternal and Child Health)-Indiana Family Help Line
	Other			

HEALTH PRIORITY: ASSURE FOOD SAFETY

GOAL: Reduce the prevalence of foodborne illness in Indiana.

Assure Food Safety

In the United States, about 48 million people (1 in 6 Americans) get sick, 128,000 are hospitalized, and 3,000 die each year from foodborne diseases, according to recent data from the Centers for Disease Control and Prevention. This is a significant public health burden that is largely preventable.

The United States Food and Drug Administration (FDA) Food Safety Modernization Act (FSMA), signed into law by President Obama on January 4, 2011, enables FDA to better protect public health by strengthening the food safety system. It enables FDA to focus more on preventing food safety problems rather than relying primarily on reacting to problems after they occur. The law also provides FDA with new enforcement authorities designed to achieve higher rates of compliance with prevention- and risk-based food safety standards and to better respond to and contain problems when they do occur. The law also gives FDA important new tools to hold imported foods to the same standards as domestic foods and directs FDA to build an integrated national food safety system in partnership with State and local authorities. The FSMA will impact the State and local food safety professionals by relying on them to help implement the FSMA.

Among the key findings of the FSMA Federal Food Safety Working Group Progress Report in December 2011 was the need for a three-dimensional approach to enhancing public health through greater food safety prevention, surveillance, and response. An increasingly globalized food supply chain, the aging of our population, increases in the number of immunocompromised and immunosuppressed individuals, and the trend toward greater consumption of foods prepared outside the home demand sustained vigilance by industry and the regulatory community, from the Federal, State, and local level, to promote food safety in retail and foodservice establishments.

Healthy People 2020 is a comprehensive, nationwide set of health promotion and disease prevention objectives designed to serve as a 10-year strategy for improving health in the United States. This strategy identifies the importance of food safety and recognizes foodborne illness as a preventable and underreported public health problem. It presents a major challenge to both general and at-risk populations. Each year, millions of illnesses in the United States can be attributed to contaminated foods.

Assure Food Safety

Children younger than age 4 have the highest incidence of laboratory-confirmed infections from:

- *Campylobacter* species
- *Cryptosporidium* species
- *Salmonella* species
- *Shiga* toxin-producing *Escherichia coli* O157
- *Shigella* species
- *Yersinia* species

People older than age 50 are at greater risk for hospitalizations and death from intestinal pathogens commonly transmitted through foods. Safer food promises healthier and longer lives, reduced health care costs and a more resilient food industry.

Many factors determine the safety of the Nation's food supply. Improper handling, preparation, and storage practices may result in cases of foodborne illness. This can happen in processing, retail establishments and the home.

Fewer consumers grow and prepare their own food, preferring instead either to use convenience foods purchased in supermarkets that can quickly be prepared or assembled, or to eat in restaurants. This gives them less control over the foods they eat.

The processing and retail food industries continue to be challenged by:

- Large employee populations that have high rates of turnover.
- Non-uniform systems for training and certifying workers.
- Ability to rapidly trace back/trace forward food items of interest.

In addition, changes in production practices and new sources of food, such as imports, introduce new risks.

Food hazards can enter the food supply at any point from farm to table. Many foodborne hazards cannot be detected in food when it is purchased or consumed. These hazards include microbial pathogens and chemical contaminants. In addition, a food itself can cause severe adverse reactions. In the United States, food allergy is an important problem, especially among children under age 18.

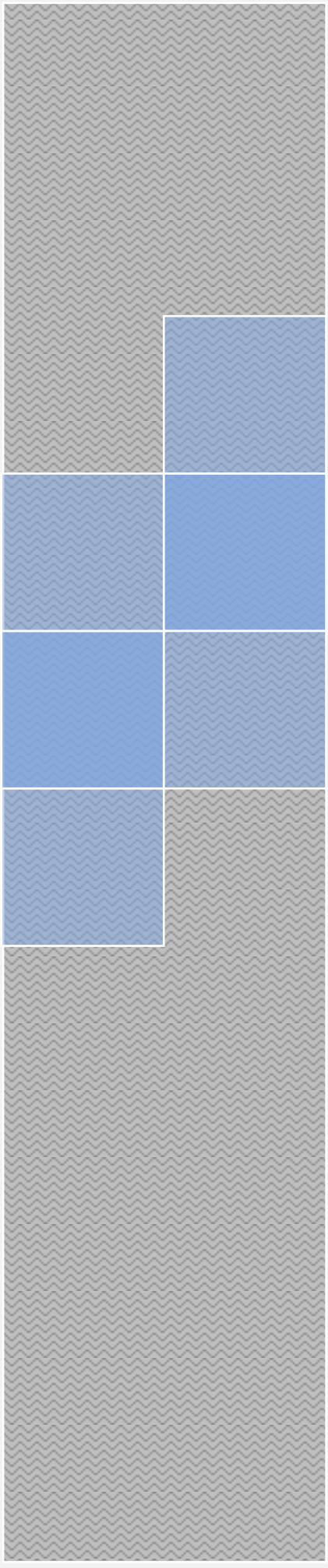
Assure Food Safety

Implementation of the Food Code supports many of the food safety objectives of *Healthy People 2020*:

- Reduce infections caused by key pathogens transmitted commonly through food.
- Reduce the number of outbreak-associated infections due to *Shiga* toxin-producing *E. coli* O157, *Campylobacter*, *Listeria*, or *Salmonella* species associated with food commodity groups.
- Prevent an increase in the proportion of nontyphoidal *Salmonella* and *Campylobacter jejuni* isolates from humans that are resistant to antimicrobial drugs.
- Reduce severe allergic reactions to food among adults with a food allergy diagnosis.
- Increase the proportion of consumers who follow key food safety practices.
- (Developmental) Improve food safety practices associated with foodborne illness in foodservice and retail establishments.

Indiana Specific Enteric Illness Data

Enteric illnesses are prevalent yet are underreported in Indiana, as well as across the U.S. The table below describes confirmed cases of various enteric illnesses from 2008 to 2012.



Assure Food Safety

Condition	2008	2009	2010	2011	2012	Average
Botulism	1	0	0	1	0	0.4
Campylobacteriosis	686	646	864	750	741	737.4
Cryptosporidium	203	282	285	263	164	239.4
Cyclosporidium	2	1	0	0	0	0.6
Giardiasis*	NR	316	399	325	227	316.75
Hepatitis A	20	19	11	24	11	17
Hepatitis E	2	2	0	3	3	2
Hemolytic Uremic Syndrome (HUS)	1	7	0	2	11	4.2
Listeriosis	10	10	15	11	10	11.2
Salmonellosis	641	590	786	650	782	689.8
Shiga-toxin producing *E. coli* (STEC)	104	97	144	147	191	136.6
Shigellosis	607	76	64	91	161	199.8
Typhoid Fever	1	1	0	4	0	1.2
Vibriosis	5	3	0	2	2	2.4
Yersiniosis	9	7	13	11	10	10

This information was collected from the ISDH Epidemiology Resource Center 2012 Indiana Report for Infectious Diseases.

**Giardiasis was made a newly reportable disease December 12, 2008 with the release of the updated 410 IAC 1-2.3 Communicable Disease Reporting Rule for Physicians, Hospitals, and laboratories.*

These enteric illnesses are identified by passive surveillance through identification by laboratory diagnosis or epidemiologic linkage. Indiana State Department of Health's (ISDH) current system is to follow-up with every reported case. Interviews are conducted by the local health department (LHD) in the county of residence to collect demographic, clinical, risk factor, and other pertinent information using a standardized questionnaire that is specific to the etiologic agent causing illness. These interviews are not dependent on serotype or PFGE results but are conducted upon initial notification. Information collected from LHD case interviews, reference laboratories, and the ISDH laboratory (serotype and confirmatory testing) is entered into the Indiana National Electronic Disease Surveillance System (INEDSS) for review by the Enteric

Assure Food Safety

Epidemiologist. Local clusters with common risk factors or serotypes are identified at this time.

In addition to passive surveillance activities, ISDH also conducts outbreak investigations for enteric illnesses. Improvements in molecular laboratory testing methods of enteric bacteria have made it easier to identify foodborne disease outbreaks at a State and National level. In 2012, ISDH reported 10 confirmed cases of *Listeriosis*, 782 confirmed cases of *Salmonellosis*, and 191 confirmed cases of *Shiga*-toxin producing *E. coli* (STEC) infections. These numbers do not include the suspect, probable, or lost-to follow-up/unconfirmed cases which still required time and resources to investigate.

In the first three quarters of 2014, ISDH Epidemiology Resource Center investigated the following outbreaks or clusters: 9 *E. coli*, 19 Norovirus, 31 *Salmonella*, 4 *Shigella*, 2 Hepatitis A and 19 of an unknown pathogen. Of the 84 clusters or outbreaks investigated, 11 outbreaks implicated a suspect food source and 30 clusters implicated no known mode of transmission. The ISDH FPP took an active role in the investigation of 6 outbreaks.

Health Disparities

Accounting for health disparities is critical to improving the health of residents of the state of Indiana. The FPP at ISDH plays a very important role in the formulation and implementation of food regulation. This goes a long way in ensuring food safety and food defense. The health impact of these actions will go a long way to reduce incidents of food borne illnesses and food contamination in Indiana. The program standards call for written documentation of program activities by way of standard operating procedures. This will help to ensure uniform implementation of Indiana food regulations across the state.

The ISDH Epidemiology Center does collect age and gender information when investigating foodborne illness outbreaks. Race/ethnicity information is collected only if the outbreak is due to a reportable disease according to Indiana law. Education level and other socio-economic data are not collected at this time for foodborne illness investigations.

Assure Food Safety

Economic Impact

The cost of food borne illnesses in Indiana can be a challenge to determine. The USDA has estimates of the US for 15 pathogens responsible for 95% of the foodborne illnesses in the US. These numbers help highlight the dire cost of food borne illnesses which are mostly preventable.

Estimated Cost of the 15 Most Common Causes of Foodborne Illness in the US

Pathogen	Cost of Illness
Clostridium perfringens	$342,668,498
Cryptosporidium parvum	$51,813,651.77
Campylobacter spp.	$1,928,787,166
Cyclospora cayetanensis	$2,301,423
Escherichia coli O157	$271,418,690
Non-O157 Shiga toxin-producing Escherichia coli	$27,364,561
Listeria monocytogenes	$2,834,444,202
Norovirus	$2,255,827,318
Salmonella (nontyphoidal)	$3,666,600,031
Shigella spp.	$137,965,962
Toxoplasma gondii	$3,303,984,478
Vibrio parahaemolyticus	$40,682,312
Vibrio vulnificus	$319,850,293
Other Vibrio spp.	$142,082,209
Yersinia enterocolitica	$278,111,168

Source: United States Department of Agriculture, Economic Research Service website. Accessed Nov 20, 2014 http://www.ers.usda.gov/data-products/cost-estimates-of-foodborne-illnesses.aspx#48498

New Areas of Emphasis

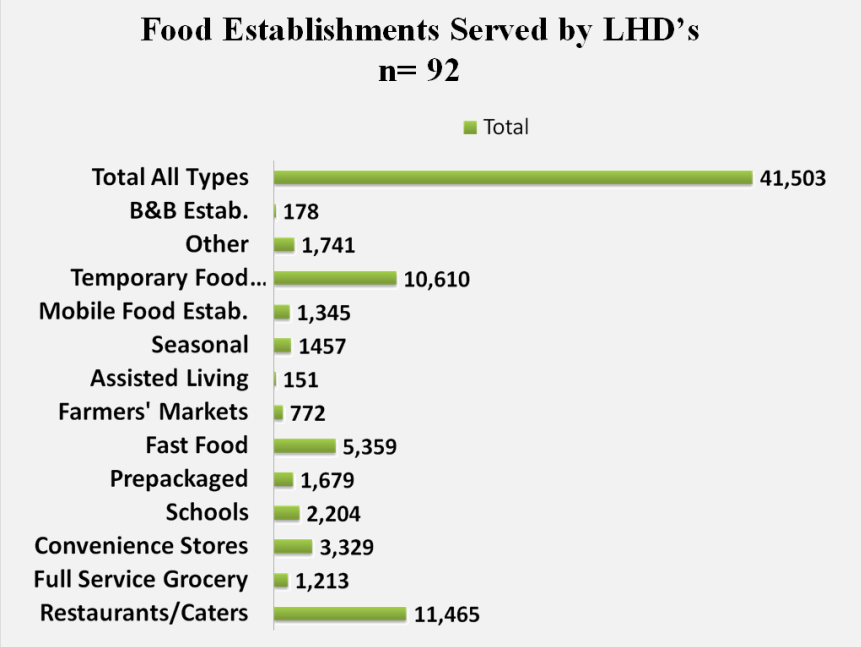
The ISDH Food Protection Program (FPP) is enrolled in the Voluntary National Retail Food Regulatory Program Standards and Manufactured Food Regulatory Program Standards, or Program Standards for short. These standards are issued by the Food and Drug Administration (FDA) and were developed through collaborative efforts from state, local and tribal agencies. The Programs Standards comprise a number of elements that when implemented will help improve food safety, prevent foodborne illnesses and quickly mitigate the health impact of foodborne disease outbreaks when they occur. This also ensures uniform adoption and implementation of the FDA Food Code.

Assure Food Safety

Furthermore, due to a large multi-state Salmonellosis outbreak in 2012 associated with cantaloupes from an Indiana farm in the southwest part of the state, a new Produce Safety Initiative began. It is recognized that a significant number of foodborne illness outbreaks are associated with fresh, ready-to-eat produce, yet little regulation or oversight exists for farms. With this outbreak alone, 261 cases with 3 deaths were identified with over half being hospitalized. The ISDH has employed two (2) Food Safety Farm Consultants to work exclusively with the farm industry to help them make improvements regarding food safety. It is anticipated that this initiative, along with the new FDA Produce Safety rule, when adopted, will provide much needed improvements in the food safety system.

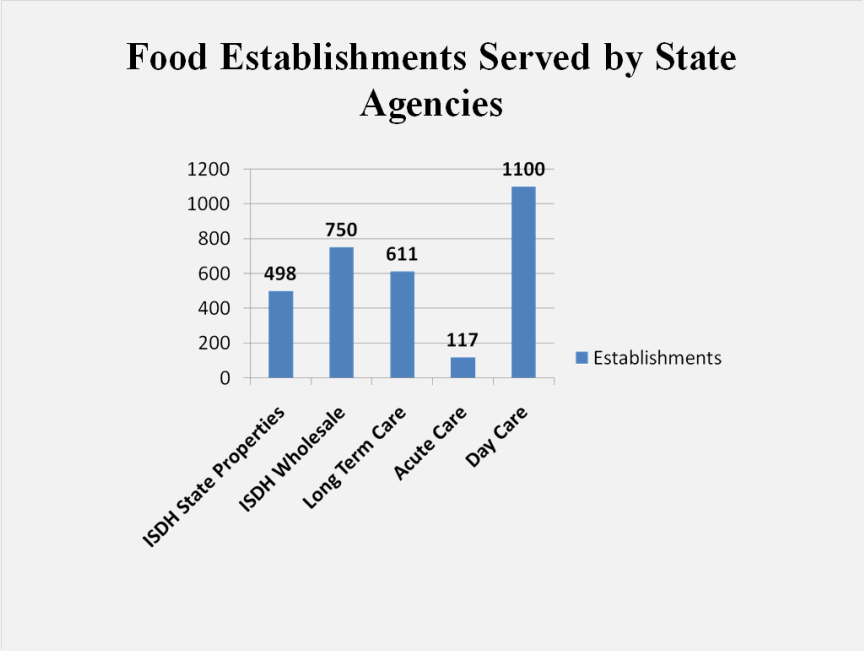
In addition, the FPP is taking the lead in the creation of Indiana's Rapid Response Team (RRT). The Rapid Response Team program promotes a nation-wide adoption of best practices and establishes state and district RRTs for integrated food/feed emergency responses. A pilot mentorship program for Indiana's non-federally funded RRT has been developed and is partnered with the Michigan Department of Agriculture and Rural Development.

The United States Food and Drug Administration (FDA) recommends 280-320 inspections per full-time employee (FTE). This equals roughly 150 establishments per FTE if 2 inspections occur each day per year on average.



Source: 2010 Food Protection Survey, Indiana State Department of Health, Food Protection Program

Assure Food Safety



Source: 2010 Food Protection Survey, Indiana State Department of Health, Food Protection Program

Based on the number of food establishments in Indiana, the overall numbers of food safety inspection officers (FSIO), the numerous activities required of FSIOs other than inspections and the dwindling public resources, it is evident that Indiana must move to a comprehensive system of risk-based inspections to offer the best possible protection to the public. This will be one of the overriding objectives of the Food Safety Priority of the Indiana State Health Improvement Plan.

Assure Food Safety

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	ISDH Food Protection achieves 80% significant compliance with the Food and Drug Administration (FDA) Voluntary National Retail Food Regulatory Program Standards (VNRFRPS). (Baseline 2010: 45%, 2014: 54%)	Ensure deliverables are met for each year's FDA cooperative agreement. Continue the self-assessment process for determination of Program Standards compliance with the ISDH retail food program. Address minimum staffing requirements recommended by the Program Standards. ISDH Food Protection Inspection Staff are standardized by a FDA or ISDH standardized staff according to established policies and procedures.	ISDH
		ISDH Food Protection achieves 80% significant compliance with the FDA Manufactured Food Regulatory Program Standards (MFRPS). (Baseline February 2013: 34%, September 2014: 60%)	Ensure deliverables are met for each year's FDA cooperative agreement. Continue the self-assessment process for determination of Program Standards compliance the ISDH wholesale food program. Address minimum staffing requirements recommended by the Program Standards.	ISDH
		Ensure ISDH Food Protection inspectors obtain basic training requirements and maintain professional development. (Accomplished 2014)	Establish policy and procedures for basic training and continuing education of inspectors. Provide and require ongoing training for ISDH food protection staff based on established continuing education requirements.	ISDH

Assure Food Safety

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Collect and maintain food inspection and investigation data from ISDH FPP and 70% of the 93 LHDs through the state database (CodePal). (2011: ISDH FPP and no LHDs, mid-2014: ISDH FPP and 16% LHDs)	Develop and implement direct data entry of inspection data to support near real-time data reporting through use of CodePal. Increase number of local health departments agreeing to use the CodePal software and who continue to use the system to issue permits, conduct inspections, and log complaints and food samples. Create and implement mechanism (DynaSync) to allow for the transmission of food safety inspection and investigation data from LHDs to ISDH and CodePal. Promote CodePal by presenting at food safety groups such as IEHA and other LHD training opportunities.	ISDH Food Protection, ISDH Office of Technology & Compliance, LHDs
		Update ISDH Rule 410 IAC 7-24 to comply with the current FDA Model Food Code. (Last update was provided November 2004.)	Host focus group meetings to evaluate potential changes to the code. Submit proposed updated rule into the rule promulgation process. Provide training for regulators to enforce the updated retail food establishment sanitation requirements.	ISDH, LHDs, FDA, food industry
		Develop and implement a field data entry and exchange system for near real time data access used to identify food safety issues relative to the commerce of shell eggs. (Update: System was placed on hold in 2014; anticipate project progress in 2015 with hopeful deployment by 2016.)	This information will be used to quickly and effectively assist with retail recall activities in the event of a shell egg related FBI outbreak.	Indiana State Egg Board (ISEB)

Assure Food Safety

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Health Communications**	Increase accessibility to the public, LHDs, other agencies, and food industry by maintaining and updating the ISDH website at least quarterly.	Update the ISDH website frequently with current events and information pertinent to food safety. Utilize social media to disseminate health messages and foster public engagement. Monitor and measure use of website. Create and update a state map with county by county information to reach staff. Create an electronic complaint form and the ability to submit plans electronically.	ISDH, including Office of Public Affairs
	Community Interventions	Establish dedicated Rapid Response Team to increase response to suspect foodborne illness cases.	Strengthen the environmental and epidemiology investigative team with laboratory support in partnership with the first national unfunded mentorship with the Michigan Department of Agriculture and Rural Development (MDARD). Improve information sharing between epidemiology, environmental health/food protection, and laboratory. Have formalized discussions when a current foodborne illness is suspect or occurring. Promote information sharing and educate on roles via Epi-Ready training. Improve notification system of foodborne illness to regulatory staff. Notify staff through "For Official Use Only" information that a foodborne illness outbreak is suspect.	ISDH, LHDs, BOAH, MDARD, healthcare providers, CDC or other involved parties such as Indiana State Medical Association, Hospitals, Long Term Care, health care providers, Emergency Nurses Association, food industry, media

Assure Food Safety

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Community Interventions**		Reduce the amount of time between identification of an outbreak and notification with health care providers during a FBI outbreak. Notify hospitals and physicians about FBI using the Indiana Health Alert Network (IHAN) and email distribution lists both internal and through field staff. Encourage and educate healthcare providers to conduct proper diagnostic testing to assist in the FBI investigation. Provide pre-paid shippers for overnight shipment of samples to ISDH Lab during response of foodborne illness outbreaks. Identify trends in reported foodborne illness and complaints. Ensure that food samples are collected early in outbreaks within 24-48 hours once a target food has been identified. Improve media alerts targeted toward potential foodborne illness outbreak cases by using news media tools, such as print, internet, social media, and email.	
		Increase the number of outreach activities with Indiana farms, especially those involved in the wholesale distribution of fresh fruits and vegetables. (2011: no formal initiative, 2014: 154 produce farms registered)	Food Safety Farm Consultants implement the ISDH Farm Produce Safety Initiative. Collect and maintain registration of farms involved in the wholesale distribution of fresh fruits and vegetable intended to be consumed in that form.	ISDH, food industry

Assure Food Safety

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Community Interventions**	Conduct a minimum of 6 Indiana Food Transportation Assessment Projects each year.	Complete established truck inspection details.	ISDH, Indiana State Police, LHDs, ISEB, FDA, USDA, Animal and Plant Health Inspection Service
		Maintain 100% compliance implementing Salmonella, Shiga toxin-producing E. coli (STEC) reduction/elimination systems on beef carcasses at slaughter.	Daily in-plant regulatory oversight and verification audits.	BOAH
		Create and annually update recall procedures. (Initial ISDH Food Protection Recall Notification SOP established 2013)	Educate and train on the Federal Reportable Food Registry. The food industry will report appropriate adverse events in the Federal Reportable Food Registry as required by law. As an agency, work with the industry to remove pathogens, notify affected food establishment if pathogen is found, and resume normal operations. Require food establishments to conduct market withdrawal or recall if pathogen is found during routine monitoring. Conduct effectiveness checks as determined by severity and health significance of the recall.	ISDH, BOAH, State Chemist, LHDs, food industry
	Other			

Assure Food Safety

SECONDARY PREVENTION				
		Outcomes	Activities	Responsible Partners(s)
Health Promotion	**Systems Change**	Host Indiana Food Safety & Defense Task Force meetings twice a year. (Meetings hosted in May and November 2014.)	Implement guidance from the Indiana Food Safety & Defense Task Force to improve foodborne illness prevention based on workgroup recommendations, such as from a charter, licensing proposal, or communications workgroup. Create formalized structure and strategic plans for the Task Force that challenges the Task Force to address more food safety and defense issues. Improve food industry food safety practices and self-monitoring. Encourage general good manufacturing practices. Provide guidance about increased surveillance for allergens and pathogens. Increase information sharing between agencies and the food and agriculture industry. Utilize FoodSHIELD for meeting announcements and document sharing. Increase level of FBI prevention awareness and activities by consulting training specialist(s) designated to the food industry. Provide guidance to industry to enhance their own surveillance testing for pathogens and allergens.	Task Force Members include ISDH, BOAH, ISEB, Indiana State Chemist, LHDs, retail and manufactured food industry, agriculture industry, trade associations, law enforcement and Indiana Intelligence Fusion Center

Assure Food Safety

		SECONDARY PREVENTION		
		Outcomes	**Activities**	**Responsible Partners(s)**
Health Promotion	**Systems Change**	Encourage enrollment and advancement in program standards by retail food regulatory programs, so that 20% statewide enrollment by 2016. (2011: 6%, 2014: 8%)	Work with enrolled LHDs to better understand needs and best practices. Use lessons learned to promote additional LHD program standards enrollment.	ISDH, LHDs, educational universities
		Complete risk factor study for retail food establishment every 5 years. (Baseline results for retail food establishments under ISDH jurisdiction expected 2015)	Identify poor food safety practices in food establishments. Assess level of FBI prevention oversight and education based on the five key public health interventions in the food industry to include: • Demonstration of knowledge • Employee health controls • Controlling hands as a vehicle of contamination • Time/temperature parameters for controlling pathogens • Consumer Advisory	ISDH, LHDs, and educational universities enrolled in program standards
		Reduce foodborne illness prevalence through education and enforcement. (Reference table of confirmed cases of various enteric illnesses in the narrative.)	Collaborate with the Indiana State Department of Health (ISDH), Indiana State Board of Animal Health (BOAH), Indiana State Egg Board (ISEB), & local health departments (LHDs) to increase inspection effectiveness based on risk. Encourage general good manufacturing practices and allergen control during inspections to improve food industry food safety practices and self-monitoring.	ISDH, BOAH, FDA, LHDs, educational universities, law enforcement, food industry

Assure Food Safety

	SECONDARY PREVENTION			
		Outcomes	Activities	Responsible Partners(s)
Health Promotion	**Systems Change**		Reduce the reoccurrence of compliance issues. Provide educational opportunities based off of specific incidences. Offer guidance for the industry to recover. Develop and implement corrective action plans. Food industry will take immediate necessary mitigation steps to stop foodborne illness outbreak or enforcement options will follow. Enforcement options include embargo, recalls, civil penalties, hearings, and cease and desist. Conduct food defense investigations if intentional contamination is suspected. Work with involved parties to help prevent future contamination and raise awareness of food defense.	
	Health Communications	Conduct or link annual training for Indiana food safety regulators.	Utilize LHD survey to educate on staffing needs based on FDA Voluntary Program Standards recommended levels. Complete FDA state training needs survey annually. Increase level of technical knowledge of good manufacturing practices of Food Safety Inspection Officer's (FSIOs), dairy, meat, egg, and feed inspectors. Onsite trainings from U.S. Food & Drug Administration (FDA), United States Department of Agriculture (USDA), etc. Utilize FDA Office of Regulatory Affairs University (ORAU).	ISDH, BOAH, ISEB, Indiana State Chemist, LHDs

Assure Food Safety

SECONDARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partners(s)**
Health Promotion	**Community Interventions**	Publish FoodBytes Newsletter at least three times a year.	Publish newsletter addressing food safety and defense issues and make accessible on the ISDH Food Protection Program website.	ISDH
	Other			

Assure Food Safety

	TERTIARY PREVENTION			
		Outcomes	Activities	Responsible Partners(s)
Health Promotion	**Systems Change**	Create and maintain formalized sampling surveillance plan with ISDH laboratories.	Agreement has been formulated and will be maintained to comply with the FDA manufactured food program standards and laboratory accreditation requirements. Collect surveillance safety testing samples for manufactured dairy products, increasing 10% from current baseline. Increase routine surveillance sampling at food establishments by 10%. Identify pathogens in the food supply through surveillance sampling of targeted foods and establishments.	ISDH, BOAH, LHDs
	Health Communications	Conduct annual outreach activities.	Increase effective food safety education, especially in schools, to consumers and within the food industry utilizing training specialists. Develop/enhance food safety knowledge and practice using innovative systems developed for targeted food industries, especially food handlers. Educate lawmakers and the public, utilizing CDC information, to encourage a change in raw milk consumption habits to reduce raw milk consumption through pet food and cow share activities to reduce cases of foodborne illness.	ISDH, BOAH, State Chemist, Indiana State Department of Agriculture (ISDA)
	Community Interventions	Continue routine surveillance testing for Listeria monocytogenes in ready-to-eat meat products. If any positive samples are found, follow-up with more intensified testing.	Routine/intensified product and environmental sampling in meat plants.	BOAH
	Other			

Reduce Healthcare-Associated Infections

HEALTH PRIORITY:
REDUCE HEALTHCARE-ASSOCIATED INFECTIONS

GOAL: Reduce the standardized infection ratio for healthcare-associated infections in health care facilities:

Catheter Associated Urinary Tract Infections reduced by 25% over 5 years

Central Line Associated Bloodstream Infections reduced by 25% over 5 years

Clostridium Difficile reduced by 30% over 5 years

Reduce Healthcare-Associated Infections

Healthcare-associated infections (HAI) are infections that patients acquire within a healthcare setting during the course of receiving treatment for other conditions. Healthcare-associated infections include:

- Central line associated bloodstream infections (CLABSI)
- Catheter associated urinary tract infections (CAUTI)
- *Clostridium difficile* infection (CDI or *C diff*)
- Methicillin resistant *Staphylococcus aureus* (MRSA)
- Surgical site infections (SSI)
- Ventilator associated pneumonia (VAP)
- Carbapenem-resistant Enterobacteriaceae (CRE)

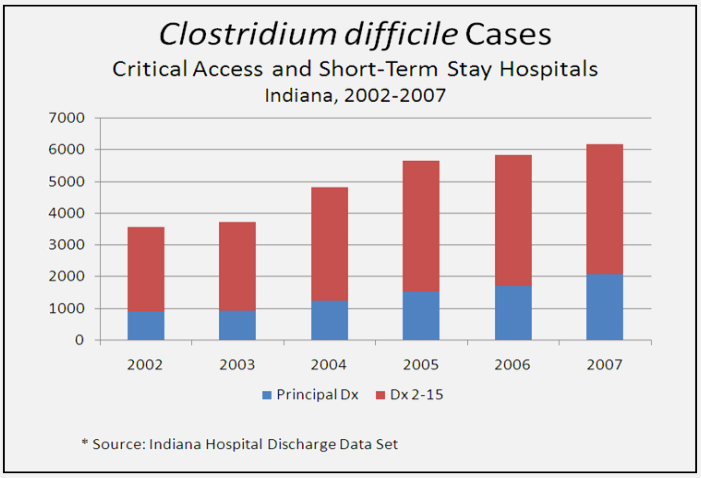
Evidence suggests that healthcare-associated infections are an increasing healthcare problem in part resulting from multi-drug resistant organisms. Studies have estimated that 5% of all admissions to an acute care setting result in a healthcare-associated infection. Infections result in 99,000 deaths per year nationally. Hospital costs per infection range from $1,000 for a catheter associated urinary tract infection to $36,000 for a central line associated bloodstream infection resulting in excess costs of over $28 billion per year.

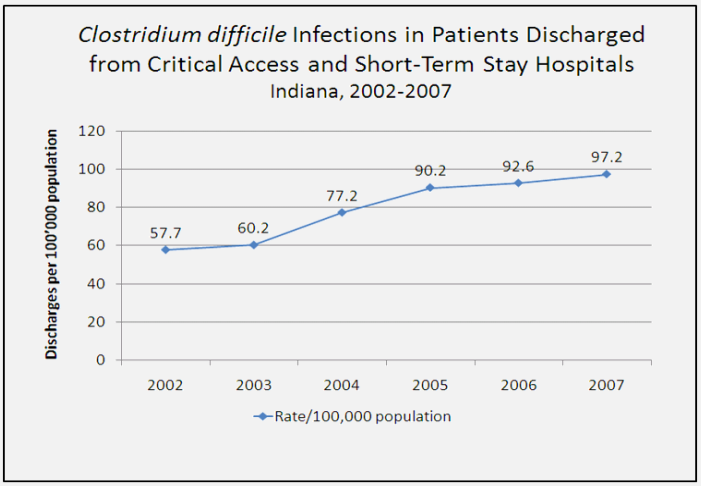
In a 2009 study of long term care facilities, one-third of long term care residents were affected by respiratory disease outbreaks. A 2008 study of Veterans healthcare facilities found a healthcare-associated infection prevalence of 5.2% with 25% of residents having an indwelling medical device and therefore at increased risk for infections.

An example of increasing prevalence of infections is *Clostridium difficile*. In May of 2008, the Association of Professionals in Infection Control and Epidemiology (APIC) conducted a national prevalence study of *Clostridium difficile*. Facilities were to take one day during the month and report on their *Clostridium difficile* incidence for that day. Data showed that 13 out of every 1,000 inpatients in the survey were either infected (94.4%) or colonized (5.6%). This was 6.5 to 20 times previous estimates. Data also indicated that 69.2% were over 60 years of age and 67.6% had co-morbid conditions (renal failure, diabetes, heart failure); 10.9% had an initial episode of severe to complicated disease. 35.1% had long term care facility residence within 30 days of onset and 47.4% had hospitalization within 90 days of onset. 79.4% had antimicrobial exposure before onset.

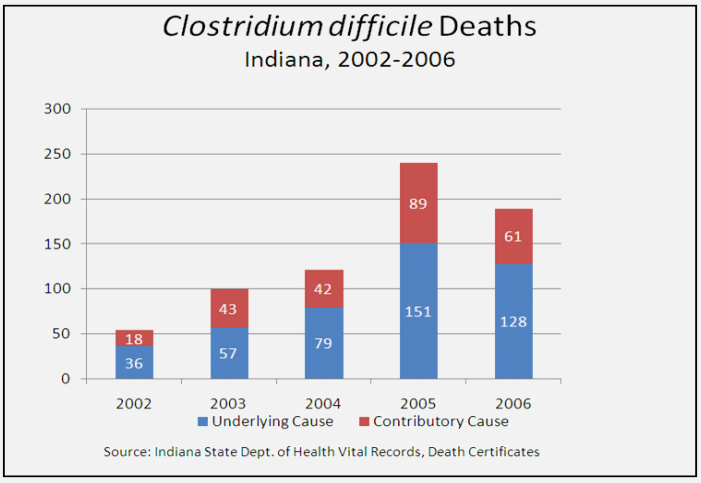
Reduce Healthcare-Associated Infections

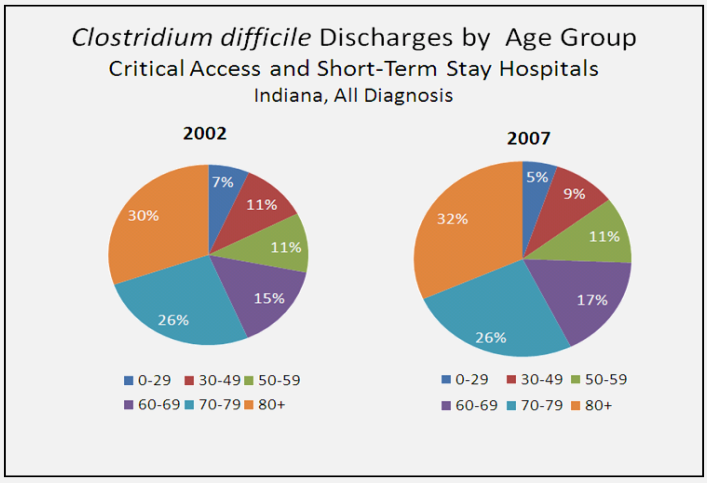
Indiana data supports the increase in reported cases of *Clostridium difficile* infections from 2002 to 2007. The following charts show *Clostridium difficile* data for Indiana:





Reduce Healthcare-Associated Infections





In its *Healthy People 2020* report, the U.S. Office of Disease Prevention and Health Promotion added healthcare-associated infections as a health priority. Healthcare-associated infections are largely preventable. A 2003 study suggested that 6% of all healthcare-associated infections are preventable with minimal infection control efforts and 32% preventable with well-organized and highly effective infection control programs. Pennsylvania and Michigan initiatives reduced central line associated bloodstream infections in ICUs by 68% and 66% through the implementation of checklists.

Previous studies have suggested, and recent Ebola cases in the US have shown, that often healthcare facilities fail to follow fundamental infection prevention practices. A 2005 study found for instance that hand hygiene compliance for healthcare workers was 40-50%, compliance with time of

Reduce Healthcare-Associated Infections

surgical prophylaxis was 40%, and many facilities had not implemented proven prevention measures.

To address these issues, the U.S. Department of Health and Human Services (HHS) released in January 2009 an Action Plan to Prevent Healthcare-Associated Infections (HAI). The Action Plan identified key actions in the prevention of healthcare-associated infections and provided states with a template for developing state prevention plans. The Action Plan recommended state implementation of infection prevention collaboratives and increased focus on tracking of infection data.

To improve the tracking of infection data, the Centers for Disease Control and Prevention (CDC) developed in 2005 a new system for monitoring healthcare-associated events and processes. The National Healthcare Safety Network (NHSN) provided standardized definitions and a consistent tracking system to assist facilities and states in developing surveillance and analysis systems.

The development of NHSN resulted in increased state legislation requiring the reporting of healthcare-associated infection data. By October 2009, 28 states required reporting of at least some healthcare-associated infection data. Of those states, 21 states were using or planning to use NHSN as the reporting tool. As part of its prevention initiative, the ISDH provided training to health care facilities on NHSN and infection identification standards to prepare facilities for improved tracking of infection data.

In September 2009, CDC awarded grants to states to implement infection prevention initiatives. The Indiana State Department of Health was awarded a grant and implemented a two-year statewide initiative.

The goals of the Indiana Healthcare-Associated Infection Initiative were:

- Improve the identification of healthcare-associated infections by health care providers
- Reduce the number of healthcare-associated infections
- Increase public and healthcare worker awareness of healthcare-associated infections

Objectives of the Indiana Healthcare-Associated Infection Initiative were:

- Create a State Plan for Healthcare-Associated Infections

Reduce Healthcare-Associated Infections

- Develop and implement a healthcare-associated infections surveillance and reporting system
- Develop and implement a healthcare-associated infections prevention initiative

The Indiana Healthcare-Associated Infection Initiative (Initiative) concluded on December 31, 2011 with the end of the CDC grant.

Changes in the Program

Since the inception of I-SHIP, CDC has established the Standardized Infection Ratio (SIR) as the way to determine progress toward reduction goals for healthcare associated infections. The SIR is defined as the reported number of infections divided by the expected number of infections. The expected number of infections is determined by CDC from various data sources and factors.

The following tables contain data for all hospitals in Indiana that must report. This was the first year (2012) that reporting of these HAIs was not voluntary so any comparisons to 2011 are not useful since less than half of those that reported in 2012 reported in 2011.

2012 Standardized Infection Ratio (SIR)		
	Indiana	United States
Central-line Associated Bloodstream Infections (CLABSI)	0.592	0.56
Catheter Associated Urinary Tract Infections (CAUTI)	1.122	1.03
Surgical Site Infections (SSI)		
Colon surgeries	1.055	0.80
Hysterectomies	0.613	0.89

Reduce Healthcare-Associated Infections

2013 Standardized Infection Ratio (SIR)		
	Indiana	United States
Central-line Associated Bloodstream Infections (CLABSI)	0.69	0.54
Catheter Associated Urinary Tract Infections (CAUTI)	1.23	1.06
Surgical Site Infections (SSI)		
Colon surgeries	1.07	0.92
Hysterectomies	0.84	0.86

The ISDH also has developed two initiatives to reduce healthcare associated infections. These initiatives begin September 2014. The first will provide advanced education and training to health care workers in nursing homes and hospitals in wound care, infection control, and quality improvement. The second will help develop regional collaboratives of nursing homes, hospitals, other health care providers, and community organizations who will work for quality improvement in health care including healthcare-associated infections. This education and training will provide the tools necessary for reducing the burden of HAIs in Indiana.

Health Disparities

The data collected on healthcare-associated infections is non-identifying and race or ethnicity is not collected.

Economic Impact

National estimates of hospital costs per infection range from $1,000 for a catheter associated urinary tract infection to $36,000 for a central line associated bloodstream infection resulting in excess costs of over $28 billion per year.

Reduce Healthcare-Associated Infections

PRIMARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partners(s)**
Health Promotion	**Systems Change**	Reduce catheter associated urinary tract infections (CAUTI) by at least 25% within five years as measured by the CDC standardized infection ratio (SIR) at hospitals reporting under the Indiana healthcare-associated infection rule. (The 2012 baseline SIR is 1.122. A 25% reduction would be to a SIR of 0.842.)	Indiana Healthcare-Associated Infection Initiative. Participation of health care facilities in a catheter associated urinary tract infection initiative. Participation by health care facilities in utilizing a catheter bundle checklist. Assess current incidence of healthcare-associated infections in hospitals and nursing homes. Use of CDC National Healthcare Safety Network (NHSN) by hospitals to track healthcare-associated infections utilizing National Healthcare Safety Network national standards.	Indiana health care facilities; Healthcare quality improvement associations, organizations, and centers; Indiana Healthcare-Associated Infection Initiative Collaborative Team; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center
		Increase hand washing compliance by healthcare workers as measured by compliance tracking by facilities participating in a project of a regional healthcare collaborative. (Baseline date will be established by these projects. Regional healthcare collaboratives are to be organized and operational by December 31, 2015.)	Indiana Healthcare-Associated Infection Initiative. Participation by health care facilities in utilizing a hand washing evaluation tool through a project of a regional healthcare collaborative.	Indiana health care facilities; Indiana Healthcare-Associated Infection Initiative Collaborative Team; Healthcare quality improvement associations, organizations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center

Reduce Healthcare-Associated Infections

PRIMARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partners(s)**
Health Promotion	**Systems Change**	Reduce central line associated bloodstream infections (CLABSI) by at least 25% within five years at health care facilities as measured by the Centers for Disease Control and Prevention central line associated bloodstream infection standardized infection ratio (SIR). (The 2012 baseline SIR is 0.592. A 25% reduction would be to a SIR of 0.444.)	Implement use of a central line bundle checklist at all hospitals. Participation by health care facilities in a central line associated bloodstream infection initiative. Participation by healthcare facilities in a central line associated bloodstream infection project through a regional healthcare collaborative. Assess current incidence of healthcare-associated infections in hospitals and nursing homes. Use of CDC National Healthcare Safety Network (NHSN) by hospitals to track healthcare-associated infections utilizing National Healthcare Safety Network national standards.	Indiana health care facilities; Healthcare quality improvement associations, organizations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center
	Health Communications	Increased availability of healthcare-associated infection education and training for health care providers and consumers. (At least 6 opportunities for training through regional healthcare collaborative by December 31, 2015.)	Development of ISDH Healthcare-Associated Infection Resource Center on ISDH website. Development and use of online healthcare-associated infection education modules for healthcare workers and consumers. Development of healthcare-associated infection resources and toolkits. Increase certification opportunities for health care providers in infection prevention provided through education training made available regionally. Development of evidence-based healthcare-associated infection in-service programs for health care facilities.	Indiana health care facilities; Indiana Healthcare-Associated Infection Initiative Collaborative Team; University of Indianapolis Center for Aging and Community; Healthcare quality improvement associations, organizations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center

Reduce Healthcare-Associated Infections

PRIMARY PREVENTION				
		Outcomes	Activities	Responsible Partners(s)
Health Promotion	Community Interventions			
	Other			
Access to Care	Systems Change			
	Health Communications			
	Community Interventions			
	Other			

Reduce Healthcare-Associated Infections

SECONDARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partner(s)**
Health Promotion	**Systems Change**	Reduce *Clostridium difficile* infections (CDI) by at least 30% within five years as measured by the Centers for Disease Control and Prevention *Clostridium difficile* standardized infection ratio calculated by CDC. (A reporting requirement for CDI has to be added to the Indiana Healthcare-Associated Infection Rule.)	Indiana Healthcare-Associated Infection Initiative. Participation by health care facilities in a *Clostridium difficile* prevention initiative. Participation by health care facilities in utilizing an environmental cleaning compliance checklist. Add *Clostridium difficile* to the reportable infections under the Indiana healthcare-associated infection rule (hospitals). Assess current incidence of healthcare-associated infections in hospitals and nursing homes. Use of CDC National Healthcare Safety Network (NHSN) by hospitals to track healthcare-associated infections utilizing National Healthcare Safety Network national standards.	Indiana health care facilities; Indiana Healthcare-Associated Infection Initiative Collaborative Team; Healthcare quality improvement associations, organizations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center
	Health Communications	Increased availability of healthcare-associated infection education and training for health care providers and consumers. (At least 6 opportunities for training through regional healthcare collaborative by December 31, 2015.)	Updating of ISDH Healthcare-Associated Infection Resource Center on ISDH website. Development and use of online healthcare-associated infection education modules for healthcare workers and consumers. Increase certification opportunities for health care providers in infection prevention provided through education training made available regionally. Development of evidence-based healthcare-associated infection in-service programs for health care facilities.	Healthcare quality improvement organizations, associations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center; University of Indianapolis Center for Aging and Community

Reduce Healthcare-Associated Infections

SECONDARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partner(s)**
Health Promotion	**Community Interventions**			
	Other			
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			

Reduce Healthcare-Associated Infections

TERTIARY PREVENTION				
		Outcomes	**Activities**	**Responsible Partners(s)**
Health Promotion	**Systems Change**	Increase number of hospitals and nursing homes participating in a regional healthcare collaborative to 100 statewide by December 31, 2015. (Regional healthcare collaboratives are to be organized and operational by December 31, 2015.)	Develop regional healthcare collaboratives throughout the state. Develop and implement regional education and training in infection control, wound care, and process improvement.	State and regional healthcare collaboratives; Indiana health care facilities; Healthcare quality improvement associations, organizations, and centers; ISDH Health Care Quality and Regulatory Commission; ISDH Epidemiology Resource Center; University of Indianapolis Center for Aging and Community
	Health Communications			
	Community Interventions			
	Other			
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			

HEALTH PRIORITY: REDUCE THE BURDEN OF HIV, STDS, AND VIRAL HEPATITIS

GOAL: Maintain the incidence of HIV, STDs, and Viral Hepatitis, thereby decreasing the total number of cases over time in Indiana.

Reduce the Burden of HIV, STDs, and Viral Hepatitis

The Division of HIV/ STD/Viral Hepatitis is comprised of several program areas addressing the prevention and care of these infections including: HIV Prevention, HIV Care and Medical Services, HIV Surveillance, Perinatal Hepatitis B Prevention, and STD Prevention. Included under these core programs are Communities of Color and Capacity Building, Training and Education, and the Statewide HIV Prevention Community Planning Group. HIV Care and Medical Services also houses the Care Coordination, Medical Services, Special Populations Support Program, and Consumer and Provider Advisory Boards. HIV Surveillance serves the Division and the community through Core Surveillance, Incidence, the Medical Monitoring Project, and the Advocacy Responsibility and Counseling Program. The Division is primarily funded via federal grants from the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA) and the Substance Abuse and Mental Health Services Administration (SAMSHA) with some additional funding through the state.

Health Disparities

By the end of December 2012, a total of 10,746 persons were living with HIV/AIDS (PLWHA) in the state of Indiana, up from 10,279 persons by the end of 2011. The disease continues to be male dominated, with the number of diagnosed males almost four times higher than that of females. The rate of infection was at 270.2 for males and 64.6 for females per 100,000 people of the general population. The majority of PLWHA are in their middle ages, ranging from 40 to 49 years of age. However, the majority of people are first diagnosed at the ages of 20 to 24 years of age. Around a third of all PLWHA are Black (36.6%), while about five out of ten people with HIV/AIDS are White (52.2%). Based on the smaller number of Blacks in the general population, the HIV prevalence rate (665.2/100,000) is exceeding the rate of Hispanics (211.7/100,000) and Whites (102.5/100,000). HIV/AIDS continues to affect Black males disproportionably more than White males.

Each PLWHA is associated with a risk category of how they were most likely infected with the disease. The overwhelming majority self-identified as Men Having Sex with Men (MSM). Its rate of 164.7 per 100,000 people of the population is between 6 to 10 times higher than any other risk category for all diagnosed people. It is the single largest category of risk for all race and ethnicity groups, and it is especially pronounced for Blacks. Heterosexual risk is the second highest risk category at 30.7 per 100,000 people.

Reduce the Burden of HIV, STDs, and Viral Hepatitis

Geographically, the vast majority of people who were diagnosed in Indiana are also living here (89.2%). Within the state of Indiana, most PLWHA are concentrated in the urban areas of the State. The majority are living in Health Region 5, corresponding to Central Indiana and the Indianapolis Metropolitan area, with 297.7 per 100,000 diagnosed people. Other regions with large numbers of PLWHA include Region 1 (181.8/100,000) and Region 2 (130.1/100,000) which corresponds to the northern part of the state adjacent to Chicago, and Region 7 (131.8/100,000) located in Southwestern Indiana.

The HIV, STD, Viral Hepatitis portion of the Indiana State Health Improvement Plan outlines overarching Division goals and objectives over the next five years. It is anticipated that these goals will become more refined as the Division's Strategic Plan is developed in response to the President's National HIV/AIDS Strategy.

ANNUAL HIV/AIDS, STD, AND HEPATITIS B & C DATA JANUARY 1, 2012 – DECEMBER 31, 2012

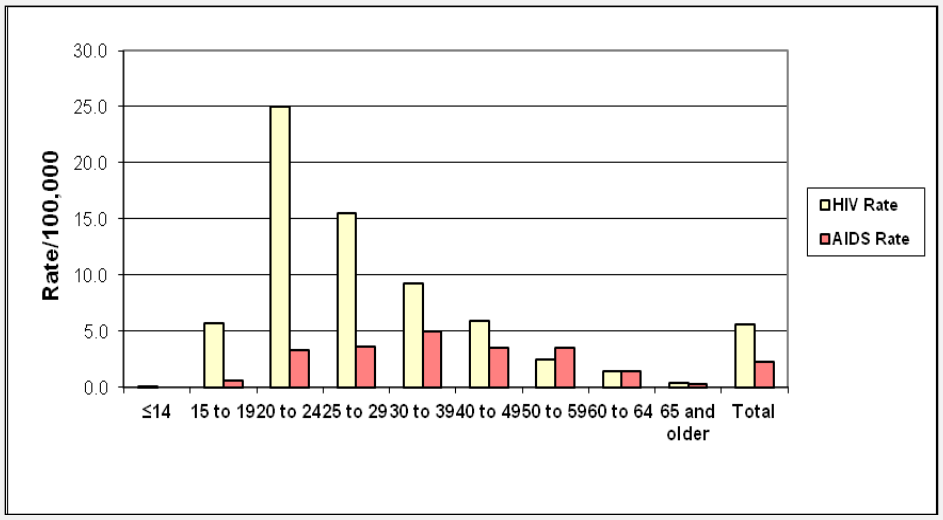
Indiana Cases	**HIV Diagnosis**	**AIDS Diagnosis**	
New Reports for 2012*	365	144	
	Persons Living with HIV *(without an AIDS diagnosis)*	**Persons Living with AIDS**	
Prevalence as of 12/31/2012**	4,852	5,894	
	Primary/Secondary Syphilis	**Gonorrhea**	**Chlamydia**
1/01/12 – 12/31/12***	224	7,338	29,505
	Hepatitis B 1/01/12 – 12/31/12	**Hepatitis C *** 1/01/12 – 12/31/12**	
	88	5,758	

Source: Indiana HIV/AIDS Surveillance Database

* New Reports are broken into 2 categories: HIV Diagnosis represents all new reports with HIV; AIDS Diagnosis represents all new reports with AIDS and conversions from HIV.
**Prevalence is the number of people who are 'living' in Indiana with HIV/AIDS, including those diagnosed in other states but living in Indiana.
***Suspected, probable, and confirmed cases based on case investigation submission.

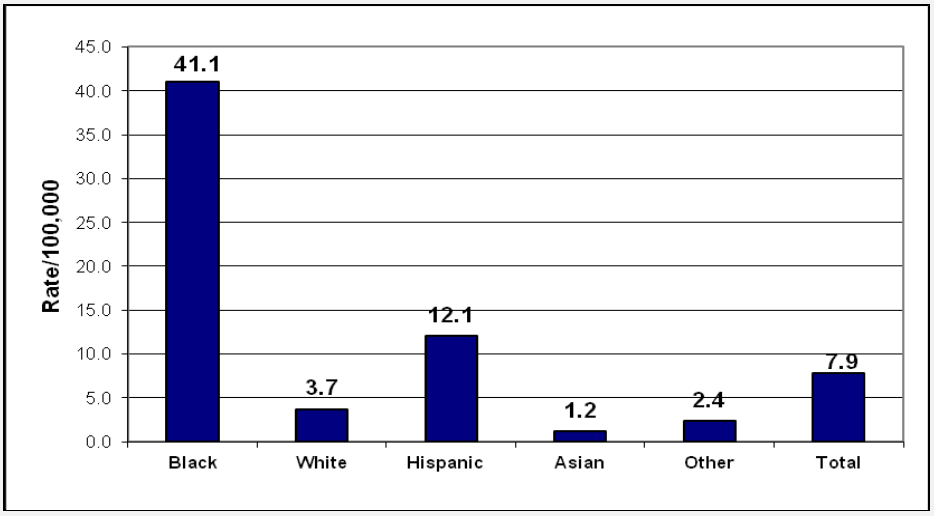
Reduce the Burden of HIV, STDs, and Viral Hepatitis

New Diagnosis Rates for HIV and AIDS by Age, 2012



Source: Indiana HIV/AIDS Surveillance Database

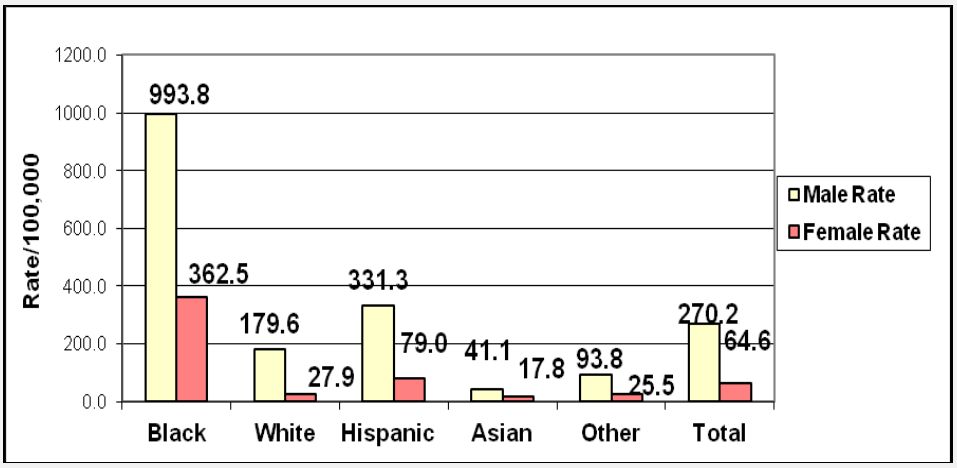
New Diagnosis Rates of HIV/AIDS by Race/Ethnicity, 2012



Source: Indiana HIV/AIDS Surveillance Database

Reduce the Burden of HIV, STDs, and Viral Hepatitis

HIV/AIDS Prevalence Rates by Race/Ethnicity & Gender, 2012



Source: Indiana HIV/AIDS Surveillance Database

Perinatal HIV Transmission

All infants born to an HIV-positive mother should be reported to the Indiana State Department of Health, even though the final HIV status of the child is not known until later. Current Indiana law (IC 16-41-2-1) requires health care providers to perform an HIV test on all pregnant women unless the woman declines the test in writing. By the end of 2012, a total of 925 children had been born to HIV positive mothers since 1982 (the beginning of record keeping).

Children Born to HIV Infected Mothers who are residents of Indiana, Cumulative 1982 through December 31, 2012

Race	Total Exposures	Child Exposures now with HIV Disease
White	289	77
Black	468	80
Hispanic – All Races	84	8
Multiracial – Non Hispanic	78	11
Other	6	3
Total	**925**	**179**

Source: Indiana HIV/AIDS Surveillance Database

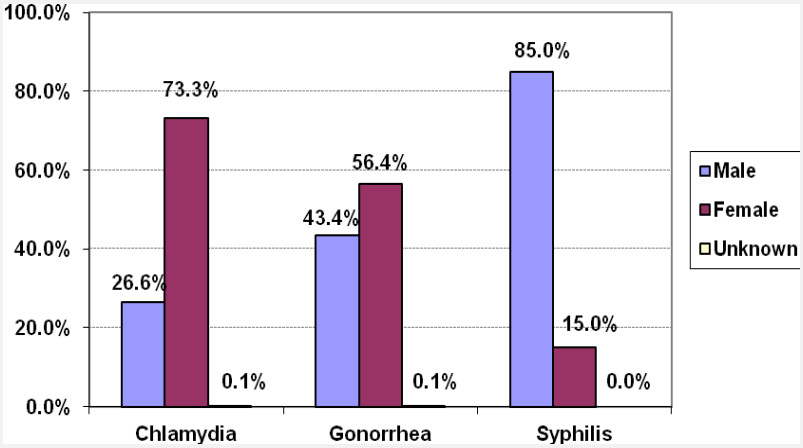
Exposed = Children born to HIV+ women. Laboratory testing has not yet determined their HIV status.
HIV Disease = Children born to HIV+ women. Laboratory testing has confirmed that the child is HIV+.

Reduce the Burden of HIV, STDs, and Viral Hepatitis

Sexually Transmitted Diseases (STDs)

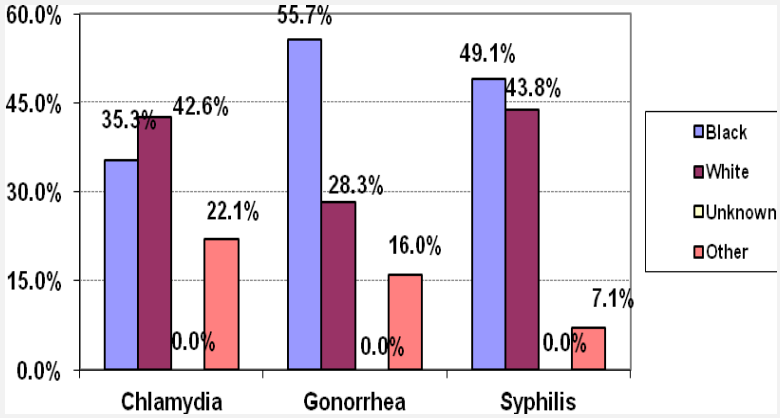
In 2012, Chlamydia continued to be the most frequently reported sexually transmitted disease (STD) in Indiana, with 29,505 reported cases, up from 27,801 cases in 2011. Gonorrhea cases were reported at 7,338 cases in 2012 and 6,569 in 2011. Primary and Secondary Syphilis was reported to be 224 in 2012, up from 173 in 2011. Females continued to outnumber males for both Chlamydia and Gonorrhea while Syphilis is more prevalent among males. Both Blacks and Whites made up the majority of STD cases in 2012.

Percentages of STD Cases in Indiana by Gender, 2012



Source: Indiana STD Database

Percentages of STD Cases in Indiana by Race, 2012



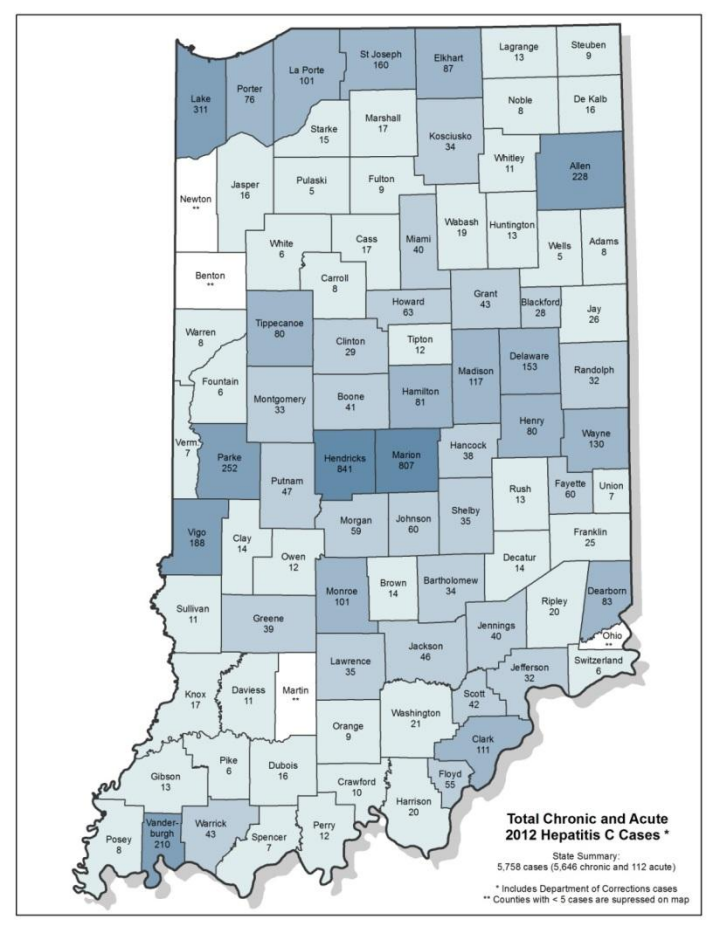
Source: Indiana STD Database

Reduce the Burden of HIV, STDs, and Viral Hepatitis

Hepatitis

The Indiana State Department of Health collects the number of laboratory reports of persons testing positive for Hepatitis B & C. In 2012, Indiana had 88 cases of acute Hepatitis B and 5,758 cases of Hepatitis C infection reported to the Indiana State Department of Health.

HEPATITIS C SUSPECTED, PROBABLE, AND CONFIRMED CASES BASED ON CASE INVESTIGATIONS.



NOTE:

Hepatitis C (HCV) cases may reflect county of medical provider and not residence of individual due to reporting system limitations.

State of Indiana:
Reported in 2012 = 5,758

(*) Counties with Indiana Department of Correction (IDOC) facilities.

Source: Indiana Hepatitis Database

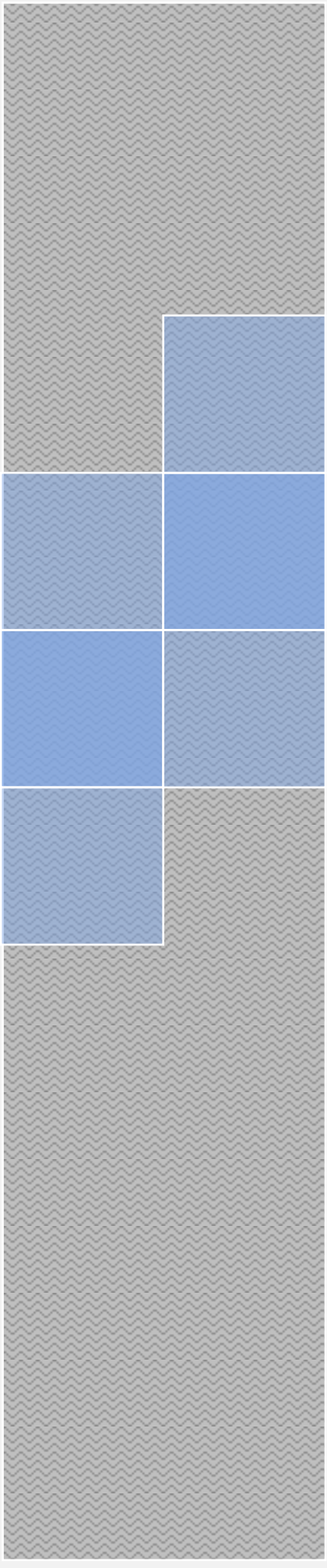
Reduce the Burden of HIV, STDs, and Viral Hepatitis

The Economic Impact of HIV and STDs

The estimated average cost of antiretroviral therapy is $20,000 annually, and does not include office copays, lab fees, and associated treatments. A recent Avalere Health study found that between 25 and 35 of the most popular insurance plans classify HIV/AIDS medications as top tier drugs. According to the Centers for Disease Control and Prevention (CDC), the annual medical costs to identify and treat STDs in the United States total $16 billion.

Recent Accomplishments

The two primary accomplishments achieved by the Division within the past year or so have been the compliance of Care and Services with the Affordable Care Act and the update of the Adult HIV Case Report Form. With the full implementation of the Affordable Care Act in 2014, the prior system of insuring those living with HIV/AIDS was modified to move individuals to the health insurance marketplace. This was an enormous shift involving collaboration from program areas throughout the health department and partner providers statewide. With recent advents in HIV diagnostic technologies, the HIV Adult Case Report form had to be modified to ensure it was collecting these new testing algorithms and additional demographic and statistical information needed to support Prevention and Care funding for the state.



Reduce the Burden of HIV, STDs, and Viral Hepatitis

PRIMARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Maintain the total number of HIV cases in the state through a decrease in the incidence of new infections annually to maintain the current number of cases at 11,087 in 2013.	Increase participation in evidence based, behavior change interventions supported by ISDH.	ISDH Division of HIV, STD, and Viral Hepatitis, and community partners
		Increase HIV Counseling and Testing services among high-risk individuals at ISDH supported testing sites from 14,711 persons in 2013 to 15,500 by the end of 2015.		
		Increase condom distribution to targeted, high-risk populations by federally funded HIV Prevention Service Providers from 82,429 in 2013 to 85,000 in 2015.		
	Health Communications			
	Community Interventions			
	Other			
Access to Care	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			

Reduce the Burden of HIV, STDs, and Viral Hepatitis

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**	Decrease the incidence of new chlamydia, gonorrhea, and primary and secondary syphilis cases annually from 35,382 in 2013 by 1% in 2017.	Increase communication to providers regarding the availability of expedited partner therapy (EPT). Provide training to ISDH supported disease intervention specialist (DIS) staff related to the timely initiation of services to assigned cases.	ISDH Division of HIV, STD, Viral Hepatitis, and Community Partners
		Identify the number of partners to Syphilis/HIV co-infected cases that are newly diagnosed as HIV positive within 60 days of the index patient's date of specimen collection for syphilis. (First year for measure.)		
		Increase rectal gonorrhea screening rates among men seeking men seen at Local Health Departments that utilize the ISDH lab. (First year for measure.)		
		Increase the percentage Chlamydia cases that are adequately treated within 14 days of the specimen collection date.		
	Health Communications			
	Community Interventions			
	Other			

Reduce the Burden of HIV, STDs, and Viral Hepatitis

SECONDARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Access to Care	**Systems Change**	Increase the percentage of people living with HIV who are receiving medical care. Increase the percentage of newly diagnosed HIV positive individuals who receive their test results and are linked to partner services from 64% in 2013 to 65% in 2015. Increase the percentage of newly identified HIV+ individuals who are linked to medical care and treatment services (assessed 12 months after diagnosis) from 70% in 2013 to 72% in 2015.	Increase the annual positivity rate of ISDH supported HIV testing facilities. Increase the percentage of newly diagnosed HIV positive individuals who receive their test results and are linked to Partner Services. Increase the percentage of newly identified HIV+ individuals who are linked to medical care and treatment services. (Assessed 12 months after diagnosis). Provide training to ISDH supported HIV testing facility staff related to targeted testing of high risk populations.	ISDH Division of HIV, STD, Viral Hepatitis, and Community Partners
	Health Communications			
	Community Interventions			
	Other			

Reduce the Burden of HIV, STDs, and Viral Hepatitis

TERTIARY PREVENTION				
		OUTCOMES	ACTIVITIES	RESPONSIBLE PARTNER(S)
Health Promotion	**Systems Change**			
	Health Communications			
	Community Interventions			
	Other			
Access to Care	**Systems Change**	Increase the percentage of people living with HIV who are receiving medical care. Increase the percentage of newly diagnosed HIV positive individuals who receive their test results and are linked to partner services from 64% in 2013 to 65% in 2015. Increase the percentage of newly identified HIV+ individuals who are linked to medical care and treatment services (assessed 12 months after diagnosis) from 70% in 2013 to 72% in 2015.	Increase the annual positivity rate of ISDH supported HIV testing facilities. Increase the percentage of newly diagnosed HIV positive individuals who receive their test results and are linked to Partner Services. Increase the percentage of newly identified HIV+ individuals who are linked to medical care and treatment services. (Assessed 12 months after diagnosis). Provide training to ISDH supported HIV testing facility staff related to targeted testing of high risk populations.	ISDH Division of HIV, STD, Viral Hepatitis, and Community Partners
	Health Communications			
	Community Interventions			
	Other			